

HARDWARE AND METAL

AND CANADIAN MACHINIST

A Weekly Newspaper devoted to the Hardware, Metal, Machinery,
Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, MAY 21, 1904.

NO. 21

POCKET **H. BOKER & Co's** KNIVES
IMPROVED
TREE BRAND
TRADE MARK
CUTLERY RAZORS SCISSORS

FOR SALE BY LEADING WHOLESALE HARDWARE HOUSES.

Best Quality Steel Sheets.

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BRISTOL, ENG. Managers Canadian Branch



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the radiators that are famous all over the world—the radiators
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Dealers and Steamfitters who wish to handle the best
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Page 2
Ans



All kinds
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GRASS CATCHERS,
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LAWN VASES, etc.

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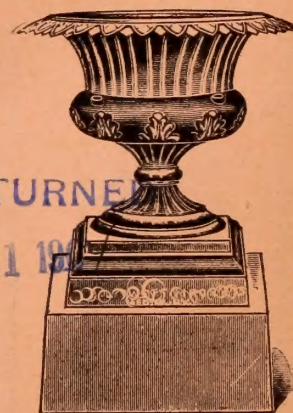
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Horse
Lawn
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Weight.
25 inch cut.... 360 lbs.
30 inch cut.... 610 lbs.
35 inch cut.... 660 lbs.
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No. 113.

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**ALWAYS
READY
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Full Hollow
Ground \$2.50 Each
Double Concave for
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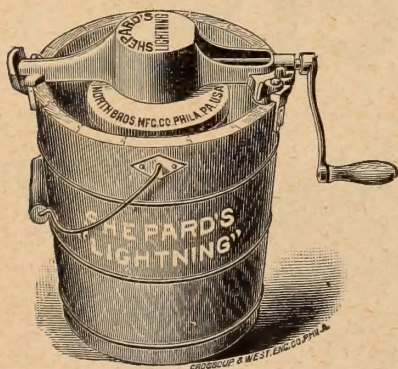
Write for Prices and Circulars.

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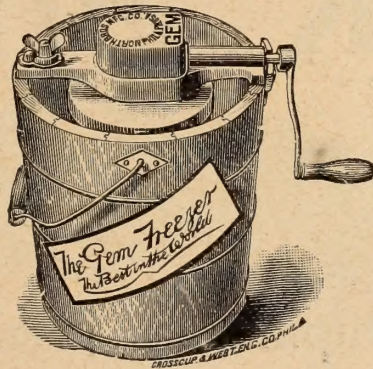
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Blizzard . . .**

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"The Ice Cream Freezer Book" tells all about
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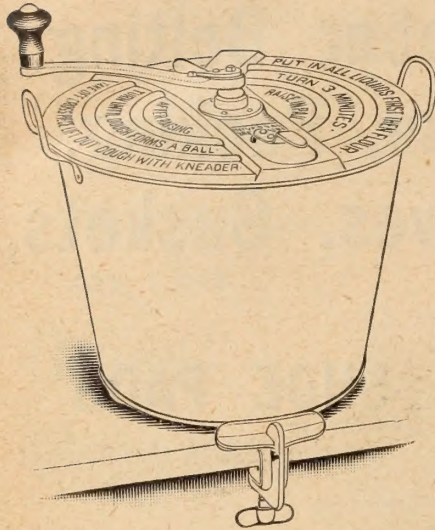


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we do so with confidence,
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The old and disagreeable task of Bread-making is done away with.

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Prompt Shipment. Prices Right.

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NEW MODEL FOR BLACK OR NITRO POWDER.

No. 290. Top snap, case hardened frame, patent fore end, pistol grip, fancy rubber butt plate, choke bored. 12, 16 and 20 gauge.

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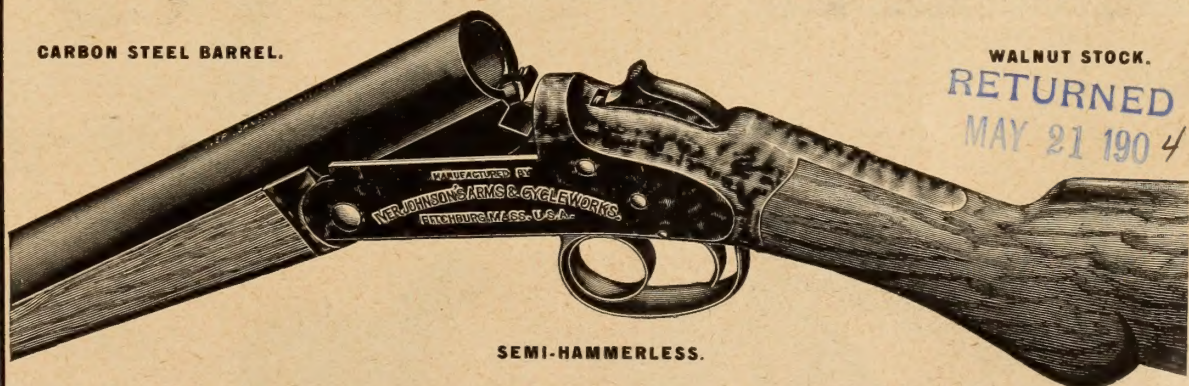
ROLLED STEEL BARREL.

NEW MODEL EJECTOR, FOR BLACK OR NITRO POWDER.

No. 295. Top snap, case hardened frame, finely-finished blued barrel, capped pistol grip, fancy rubber butt plate, choke bored. 12, 16 and 20 gauge.

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Page 3
JWS



CARBON STEEL BARREL.

WALNUT STOCK.

SEMI-HAMMERLESS.

No. 1900. Automatic ejector, gun is opened by pulling ring in front of trigger, case hardened frame, pistol grip, rubber butt plate. 12 and 16 gauge.

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“Maxwell Favorite Churn” Lawn Mowers.

PATENTED FEATURES: Improved Steel Stand, Roller Bearings, and Foot and Hand Lever Drive, and Detachable Driving Link. Improved for season of 1904. Steel or Wood Frame as desired.

High and Low Wheels, from 12 to 20 in. widths. Cold Rolled Steel Shafting, Crucible Steel Knives and Cutting Plate.

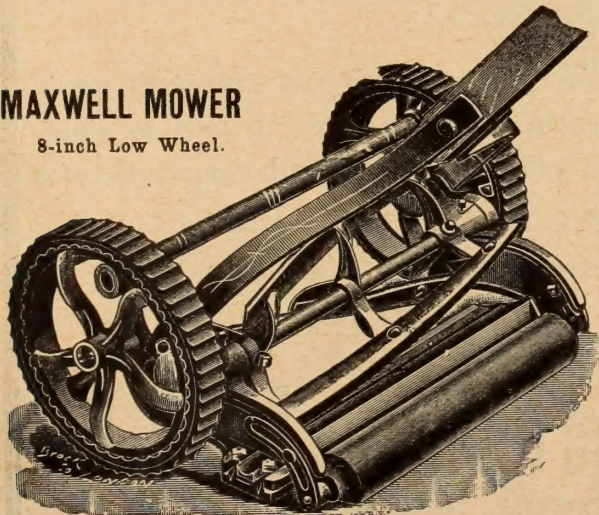
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Wheelbarrows. In Four Different Sizes

SEND DIRECT TO US.

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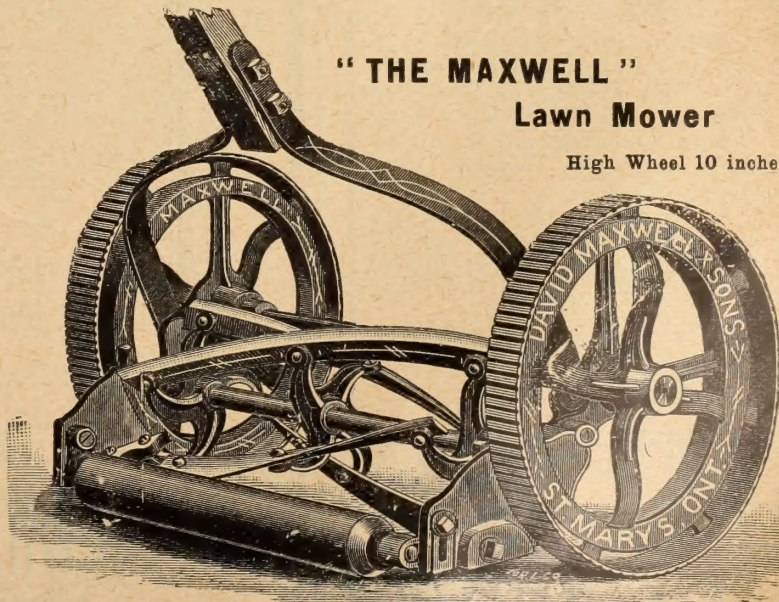
8-inch Low Wheel.



“THE MAXWELL”

Lawn Mower

High Wheel 10 inches



Galt Carpet Stretcher

Away Ahead of All Others

Simple, Effective. Will not tear the finest carpet. Will sell to every household on the score of price and utility. Profitable to dealer.

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Grand River Metal Works,
Galt, - Ont. Limited



DEPARTMENT of ADVERTISING SERVICE.

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HARDWARE AND METAL can prove of valuable assistance to the selling end of any business which seeks trade among the hardwaremen and general storekeepers of Canada.

We advance many plain, indisputable arguments to this effect.

And still there are some folks who can't see it.

Some who can't see how it's going to pay them.

And won't even invest a few dollars to find out.

Very few folks like this, but we would like to convince even them.

If we only could, we'd get a good deal of satisfaction out of it—and we know they would, too.

Don't you think they're blind to their own interests?

Here's a paper that finds a welcome in every worth-while hardware store from Halifax to Vancouver once every week—so can't you see that an announcement of any interest must surely command some attention?

The advertising columns of HARDWARE AND METAL provide about the best way we know of keeping in close touch with all the hardwaremen of Canada all the time.

You can see value in a paper like this—

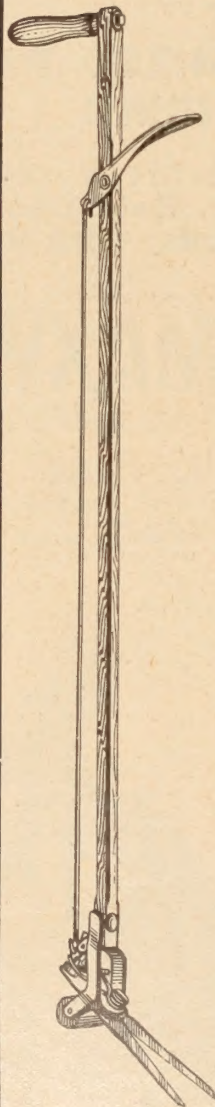
Can't you?

Hardware and Metal

232 McGill St.,
MONTREAL.

10 Front St. E.,
TORONTO.

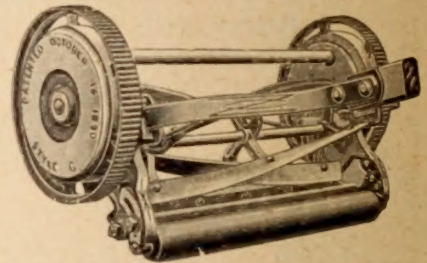
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This is the season of the year when the grass needs shaving. We can supply you with the most up-to-date Lawn Shavers in existence. The

Perfection LAWN MOWER

is just a little ahead of anything on the market to-day.



The material used is of the highest quality only. The adjustment is easy and accurate. It cuts smoothly, runs easily, and will stay sharp a long time. In fact, it is the ideal Lawn Mower. Order a few and be convinced. All sizes in stock.

The Fisk & Jay Grass Trimmer needs no words to explain its use. It sells on sight. Let us send you a few with your order for Mowers. Prices are right.

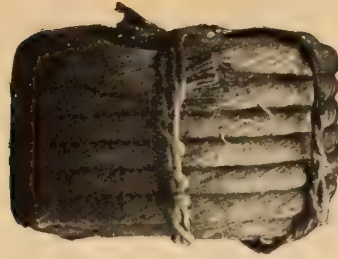
ORDERS SHIPPED SAME DAY AS RECEIVED.

John Bowman Hardware & Coal Co.

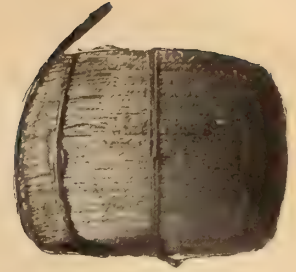
LONDON, CANADA.



*Hay Rope on Reels
Shingle Yarn on Reels*



*Lath Yarn
Hide Rope*



*Hay Rope in Coils
Bale Rope in Coils
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**"Royal"
Brand
Binder
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**"Royal"
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In our factory, none but the best fibre is used. Our workmen are the most skilled in the Cordage Trade now employed in Canada. Free Union Labor only employed by us.

Canadian Cordage & Mfg. Co.
PETERBOROUGH, ONT.

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Largest manufacturers in the world of

WELDLESS CHAIN.**ONEIDA COMMUNITY LOCK RING.**

As a halter chain they are without an equal, as they possess the exclusive feature of a patented Lock Ring, which enables the animal to be instantly tied "short" or "long."

The standard for Cow Ties, Dog Leads and Fancy Chains.

In use by the leading railroads.

Short lengths furnished without extra charge for manufacturers of agricultural implements, makers of windmills, etc. A list of these users would include the best known firms of the country.

Also well adapted to use for padlocks and nearly every other purpose for which chains are wanted.

Exported in large and increasing quantities.

Address for catalogue,

ONEIDA COMMUNITY LIMITED,
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STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

**WOOD SCREWS,
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WIRE STAPLES.**

WIRE OF ALL KINDS
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COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
and
TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO.

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**THE AUER
GAS LAMP****"Turns night-time into day-time"**

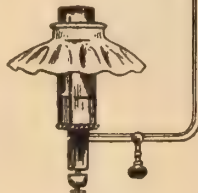
NEW MODELS. LOWER PRICES.

We offer you the best made lamp on the market, built scientifically.

We offer you a lamp that will light your store for half the cost of kerosene.

We offer you a lamp that is safer than a coal oil one.

We offer you a lamp which you can sell at a good profit.

No. 25
100 Candle Power.**Do you want the Agency for it?**

== THEN WRITE FOR ==
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EVERY LAMP GUARANTEED.

AUER LIGHT CO., 1682 NOTRE DAME ST., MONTREAL.

WIRE ROPE**"ACME" Brand**

Extra tensile strength for heavy work.

Should only be used on special large
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THE B. GREENING WIRE CO.

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In ordering, please specify **The Abbey Improved Chilled Shot Co., Ltd., New-castle-on-Tyne.**

N.B.—We also make Hard and Soft Shot, but strongly recommend Improved Chilled Shot for penetration.

N.B.—The only Company in Great Britain devoting its whole time to Shotmaking.

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Manufacturers of **FLATWARE, CUTLERY and ELECTRO PLATE.**

Ask for our Catalogue and Quotations.



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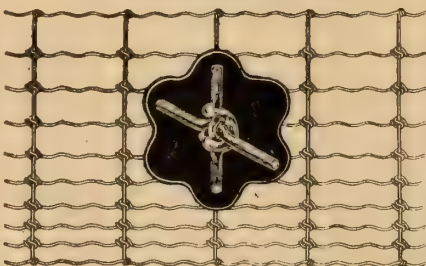
All our work is guaranteed to be satisfactory.

THE PARSONS-IRONS CO.

58 Adelaide St. W., - TORONTO.

Your Customers

the farmers are looking for a fence, strong, serviceable and durable at a reasonable cost. You can supply it to them in the

IDEAL

It is strictly up-to-date and the best value to be had in wire fencing to-day.

A GOOD SELLER

We have a style for every purpose in either heavy or light fencing. Write for catalogue showing fencing and gates.

Coiled-Spring Wire

unexcelled in quality, shipped promptly

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Sole Agents for Manitoba and N. W. T.



This design a guarantee of quality.

Heavy Red-Brown Wrapping

FOR EXPRESS PARCELS. STRONG, TOUGH AND STIFF.

Samples and prices gladly sent.

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GALVANIZED FENCE HOOK

FOR FASTENING WOODEN PICKET ON WIRE FENCE.



FENCE HOOK

WIRE NAILS, COILED SPRING, BARB and PLAIN FENCE WIRE, OILED and ANNEALED, CLOTHES LINE WIRE, STAPLES, etc.

THE WESTERN WIRE & NAIL CO., Limited,

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"Little Shaver"

Cutest Thing in the Kitchen

Shaves chocolate so thin that it dissolves without stirring. Slices Potatoes, Radishes, Cucumbers, Onions, Apples and all the smaller fruits and vegetables. Made of black walnut. Knife is fine tempered steel.

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J. M. MAST MFG. CO., Lititz, Pa.

Canadian Agents:

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LONDON, ONT.

SPRINGS

FLAT.—SPIRAL OR VOLUTE

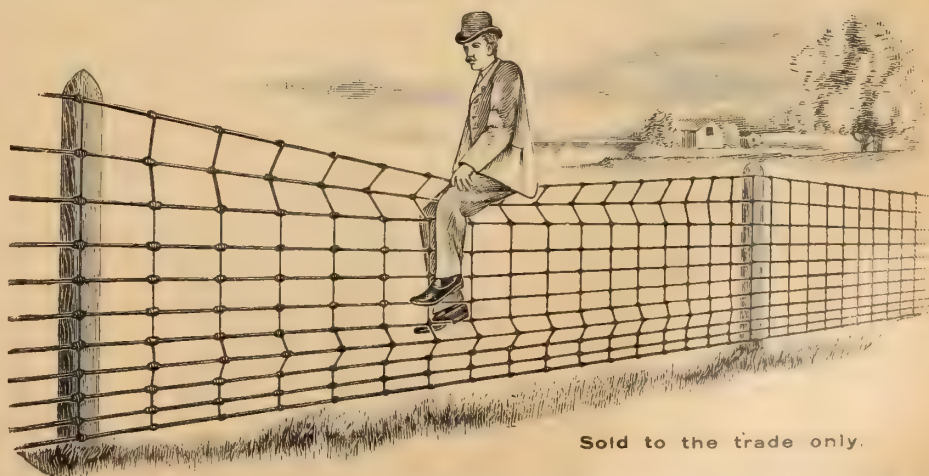
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THE WALLACE BARNES CO.

BRISTOL CONN.

DILLON FENCING

THE HINGE IS COMPLETE, AND WORKS WITH THE UTMOST FREEDOM.



Sold to the trade only.

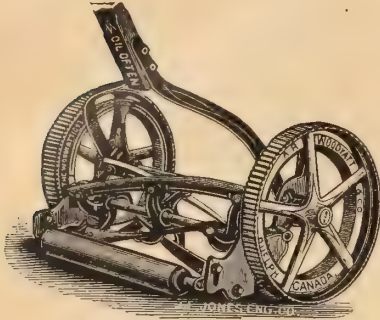
CAVERHILL, LEARMONT & CO., Agents
at Montreal and Winnipeg.

Manufactured and sold by
OWEN SOUND WIRE FENCE CO., Limited
Owen Sound, Ont.

The Sound of the Lawn Mower is Heard in the Land.

Whose Mower ?

Taylor-Forbes Mower.



The Woodyatt

THERE ARE REASONS :—Guaranteed ; repairs can be had quick and cheap ; the best and simplest, smoothest running, most durable mower made. Handled by 95 per cent. of the jobbing trade.

Get orders in *at once*—give orders to jobbers—or if more convenient send direct, giving your jobber's name — the cost is the same.

SEND FOR CATALOGUE "B."

THE TAYLOR-FORBES CO., Limited

Montreal Branch :
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GUELPH, CANADA.

The largest manufacturers of Hardware in Canada.

SEASONABLE GOODS



Water Coolers.

Handsomely Japanned and decorated.

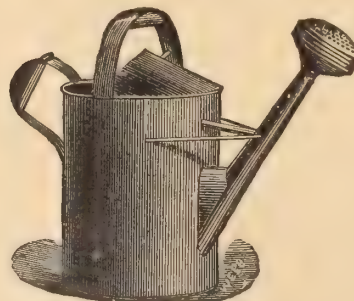
Nickel Plated Faucets,
5 Sizes.

Water Pots.

Plain and Japanned,
6 Sizes.

Galvanized, 3 Sizes.

All supplied with our patent Rose.



Novelty Refrigerators and Water Coolers

3 Sizes, Made of Galvanized Iron.
Decorated in Oak. Separate compartment for Ice,
with Nickel-plated Faucet attached.

WE WILL BE PLEASED TO QUOTE YOU.

KEMP MANUFACTURING CO., TORONTO, CAN.

SMELTING IRON BY ELECTRICITY

IN the preliminary report made to the Hon. Clifford Sifton, Minister of the Interior, by Dr. Eugene Haanel, on behalf of the commission appointed to investigate the different electro-thermic processes for the smelting of iron ores and the making of steel, now in operation in Europe, the following valuable information is given:

GYSINGE, SWEDEN.

At Gysinge, Sweden, steel of superior quality is made by the smelting together of charcoal-pig and scrap in an electric furnace of the induction type; that is to say, a furnace without electrodes. This process corresponds to the crucible steel process, but it has certain advantages over the latter in that the melted materials at no time during the operation are exposed to gases, some of which, when absorbed, deleteriously affect the quality of the product. The furnace worked quietly and regularly, producing on the average four tons of steel in twenty-four hours. "Tapping" occurred every six hours. 116 electric horse-power years were required per ton of product. The cost, at the rate of \$10 per electric horse-power a year, would be \$1.16 per ton of product.

KORTFORS, SWEDEN.

At Kortfors, Sweden, the Heroult process of making steel is in operation, but the furnace is at present employed in the making of ferro-silicon.

LA PRAZ, FRANCE.

At La Praz, France, steel is also made from melted scrap. The process differs from that at Gysinge, in that it permits of the purification of the materials employed, two slags being made for that purpose, and carburization is effected in the furnace by carbon briquettes. The furnace is of the tilting pattern, consisting of an iron casing lined with dolomite brick. The bottom of the furnace is filled on top of the lining with crushed dolomite, upon which the charge reposes. Two electrodes pass through water-cooled joints in the roof of the furnace. The electrodes are vertical and parallel and are adjusted vertically either by hand or a specially constructed regulator. An alternating cur-

rent of 4,000 amperes of 110 volts is distributed to the electrodes. Different classes of steel are made by the company at a cost per electric energy absorbed of \$1.54 per ton of ingot.

The following classes of steel are made at the La Praz works and at the selling prices per ton set opposite the description:

	Per ton of 2,000 lbs.
Steel of exceptional hardness:	\$363 60
Class 1—Extra hard steel.....	272 60
" 2—Very hard steel.....	272 60
" 3—Hard steel	218 00
" 4—Medium hard steel	218 00
" 5—Tough, medium hard steel	145 40
" 6—Tough steel	145 40
" 7—Tough mild steel.....	123 20

Interesting experiments were made for the commission at this plant in the production of pig from the ore in a very simple furnace, consisting of an iron box of rectangular cross-section, open on top and lined with refractory material. The bottom of the furnace in communication with the iron casing constituted one terminal of the electric circuit; a carbon electrode of square cross-section and about three feet in length, placed vertically in the open top of the furnace, constituted the other terminal. By hand regulation this electrode could be lowered or raised within the furnace. Thirty charges of ore were made during the working and thirteen taps of metal and slag taken.

TURIN.

The furnace built at Turin, Italy, by Captain Stassano, for the Italian Government, and placed in the Government gun foundry, was found not to have been in operation for a number of months, the refractory lining of the roof having fallen in and the new magnesite bricks, ordered from a German firm, not having yet arrived. Nor could a date be given when the furnace could be seen in operation. Through the kind offices of the British Ambassador at Rome, however, permission was obtained from the Italian Government to inspect the furnace.

LIVET.

By far the most important experiments witnessed by the commission were those made by Mr. Keller, of Keller, Leleux & Company, of Livet. Some

ninety tons of iron ore were used to demonstrate the economic production of pig iron by the electric process. The furnaces employed for these experiments were the furnaces used in the regular work of the company of making by the electric process the various ferros, such as ferro-silicon, ferro-chrome, and so forth. The company at the time of the visit of the commission were under contract to furnish ferro-silicon to the Russian Government, but generously interrupted their pressing regular work to undertake the making of experiments for the commission.

The furnace employed is of the resistance type, and consists of two iron casings of square cross-section, forming two shafts, communicating with each other at their lower end by means of a lateral canal. The casings are lined with refractory material. The base of each shaft is formed by a carbon block. These blocks are in electric communication on the exterior of the furnace by means of copper bars. The carbon electrodes to which electric current is distributed pass two-thirds of their length into the shaft. The electrodes are prisms 72 centimetres in diameter and 135 centimetres long.

In starting the furnace the charge is introduced between the carbon blocks and the electrodes, which latter are then in their lowest position. The current passes from one electrode through the material to be reduced to the carbon block, from thence outside of the furnace by means of the copper conductor to the other carbon block, through the charge and to the other electrode. The current meeting with the resistance of the charge, the latter is heated, the reduced metal flowing along the canal forms internal connection between the electrodes. The current in the exterior conductor diminishes as the amount of reduced metal increases. The electrodes are now raised, the charging continues until finally the electrodes occupy their normal positions and the shaft below the electrode and between the electrode and the sides of the furnace is completely occupied with the charge. Under these condi-

tions, but a small current flows through the external conductor: the main current passing within the furnace from electrode to electrode. This ingenious arrangement enables the furnace to be worked continuously, without at any time varying excessively the load on the alternator. As a matter of fact, the voltmeter and ammeter throughout the experiments were remarkably steady.

Three sets of experiments were made as follows:

- 1st—Electric reduction of iron ore and obtaining different classes of pig: grey, white and mottled.
- 2nd—Electric reduction of iron ore containing a definite amount of carbon in the charge, with a view of ascertaining the amount of electric energy absorbed in the production of one ton of pig iron.
- 3rd—The manufacture of ordinary steel of good quality from the pig manufactured in the preceding experiments.

The different classes of pig iron were obtained without difficulty, and the furnaces throughout the experiments worked quietly and without the slightest accident, the gases discharging on top in flickering flames, showing that the gas resulting from the reduction of the ore escaped at low pressure. The workmen employed were ordinary Italian laborers without any special training. A number of castings, such as columns, pulleys, gear wheels, plates, and so forth, were made with the metal drawn directly from the furnace. The castings showed sharp edges, a comparatively smooth surface, and were sound throughout.

For the determination of the electric energy absorbed the voltmeter and ammeter employed to measure the volts and amperes were calibrated in the laboratory of the director of the electrical department of the University of Grenoble, who also ascertained the power factor of the alternator furnishing the electric energy. The electric energy absorbed per ton of pig was found to be .226 horse-power years.

COST OF THE PRODUCT.

The following are the figures which go to make up the approximate cost of producing a ton of pig iron:

1. Ore (hematite), metallic iron 55 p. c., 1.842 tons at \$1 52 per ton	\$2 76
2. Coke for reduction, .33 tons at \$7 per ton	2 31
3. Consumption of electrodes at \$5 per 20 lbs	0 77
4. Lime	0 30
5. Electric energy, 0.226 horse power years, at \$10 per electric horse power year	2 26
6. Labor at \$1.50 per day	0 90
7. Different materials	0 20
8. General expenses	0 40
9. Repairs, maintenance, etc	0 20
10. Amortization (machinery and buildings)	0 50

Exclusive of royalty.....\$10 60

To satisfy the commission, Mr. Keller made experiments to illustrate his process of making steel. The details of the operation and the figures relating to his experiments are in the hands of Professor Harbord, the English metallurgist, who accompanied the commission.

In regard to other processes it was found that Mr. Harmet of St. Etienne, who has published papers and obtained patents on the electric process for smelting iron and making of steel, and Mr. Gin, of Paris, who has obtained a patent for the production of steel from scrap, have as yet no plant in operation by which their methods might be tested. Photographs of the furnaces employed, except the Stassano furnace at Turin, have in each case been obtained, also detailed working drawings of the furnaces examined.

CONCLUSIONS.

It must be pointed out that the results obtained at Livet were the results of experiments in furnaces not specially adapted to the work required to be done. With the improved furnaces, of which the commission has secured detailed drawings, permitting on account of higher column of charge a more effective use of the reducing power of the carbon monoxide evolved and the employment of machinery for charging the furnace to reduce the cost of labor, a much better figure than the one given may be expected.

The processes of electric smelting must yet be regarded as in the experimental stage, no plant existing at present where iron ore is commercially reduced to pig by the electric process. The more remarkable, therefore, it appears that experiments made off-hand, so to say, in furnaces not at all designed to be used for the production of pig, should give a figure of cost which would enable an electric plant properly designed and managed to compete with the blast furnace. It is, moreover, reasonable to expect that as experience in electric smelting accumulates, the design of the electric furnace best suited to the conditions of the high temperatures with which the metallurgist has to deal will undergo changes which will reduce the absorption of electric energy to a minimum. The electric engineer will also be called upon by the new industry to design electric plants specially suited to the conditions of electric smelting. When it is considered that

the electric process is applicable to the smelting of all other ores, such as copper, nickel, silver and so forth; that the furnaces are of simple construction and the regulation of the heat supply under perfect control, we may expect that the application of electric energy to the extraction of metals from their ores will not be long delayed, and that familiarity with handling large currents and experience gained in electric smelting will result in displacing some of the costly and complicated methods by comparatively simple and economic processes. The immediate effect of a plant erected for the smelting of iron ores which will demonstrate the economic production of pig and the making of steel will arouse the faith of the industrial world in the new metallurgy, and other industries dependent upon electricity as the agent or to which electricity can be applied will follow as a consequence in the wake of this pioneer plant.

AN ENTERPRISING MONTREALER.

THE Acme Can Works, Montreal, have recently installed a new gas plant in their factory. In conversation with a representative of Hardware and Metal, Mr. Campbell stated that the service supplied by the Montreal Light, Heat and Power Company has proved very unsatisfactory, and that often during their busiest season the pressure has been so low that it has been impossible to turn out anything like the required amount of work. The installation of the new gas plant will remove all these difficulties, since it has a capacity of fifty thousand feet per day, whereas the requirement during the busiest season is never more than twenty-five thousand feet per day. It is also claimed that the new plant will effect a saving of not less than 70 per cent.

This gas plant, which is quite unique, is the third of the kind to be installed in Canada on an extensive scale, one being in St. Catharines and the other in Hamilton. The main peculiarity of the Acme gas system is the process of forcing air under pressure through a series of generators containing a crude distillation of petroleum. The oil is stored underground, and admitted to the generators by means of a pump with automatic devices which control the amount in exact proportion to the volume of gas produced. The plant is absolutely automatic in regard to amount of gas produced, and there is therefore no storage of gas on the premises.

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Pittsburg Steel Co.

THE catalogue and price list of "Pittsburg Perfect Brands," issued by the Pittsburg Steel Co., should provide interesting reading for hardware merchants. Interesting prices are quoted on various kinds of wire, nails, and staples. Interesting illustrations are given showing the various departments of the company's works. The catalogue states that the company make a specialty of mixed car lots. They have good facilities for shipping mixed car lots. Some dealers can not very well take into stock a full car of any one kind of product. The Pittsburg Steel Co. sell mixed car lots at the same price per 100 lbs. as a straight car.

The same company have issued a booklet describing their "Pittsburg Perfect" fence. There are some special points about this fence deserving of attention. It is electrically welded, thus making it practically indestructible. Both these booklets can be obtained by readers of *Hardware and Metal*, from Job W. Taylor, 388 St. James street, Montreal.

Steel Lathes.

The General Fireproofing Co., Youngstown, Ohio, have issued a catalogue telling of the Herringbone expanded steel lath. The object of issuing this catalogue is to give a representative idea of the classes of buildings in which this class of lath is used.

Corliss Engines.

The Minneapolis Steel & Machinery Co., Minneapolis, have issued a handsome catalogue describing the construction of their Corliss engines. The illustrations are good, and the catalogue should prove of value to those interested in this class of engine.

Sederholm Boiler.

The Allis-Chambers Co., Chicago, are sending out a booklet describing their Sederholm boiler. The booklet contains a sketch of the requirements of a good boiler, besides giving a detailed description of the Sederholm. This booklet should prove of great interest to all users of steam.

Murray Iron Works.

The Murray Iron Works, Burlington, Iowa, have issued a catalogue describing and illustrating their Corliss engines and high-pressure boilers. The catalogue is a handsome one, containing detail cuts and a description of each part of the engines and boilers.

Buffalo Forge Co.

The Buffalo Forge Co., Buffalo, have issued a set of booklets, one for each of the following subjects: High speed engines; Buffalo fan system of heating, ventilating, drying and cooling; Buffalo steel plate fans and pulleys; steel pressure blowers for cupola, and high pressure blast service; blowers for forge



Paint Profits.

If you are selling paints to make money, you want to make the most money and to do the largest business.

It takes the best paint and the most push to do the biggest business. The better the paint and the greater the push, the bigger the business. You want quality—but you want more—you must have push—progress—advertising.

If you want the best of these—the finest quality—and the most effective advertising—the most helps—the biggest and most profitable paint business, write now for our 1904 Agency Proposition.

THE SHERWIN-WILLIAMS CO.
PAINT AND VARNISH MAKERS

CANADIAN DIVISION,
Headquarters—21 St. Antoine St., Montreal.
Depots—86 York St., Toronto; 147 Bannatyne St., East, Winnipeg.

shops, forced draft, etc.; planing mill exhaust fans; Buffalo disk wheels; Buffalo down draft forges; Buffalo hand blowers, and Buffalo blacksmiths' drills, tire benders, punches, etc.

Steam Boilers.

The Minneapolis Steel & Machinery Co., Minneapolis, have issued catalogue "E," their first steam boiler catalogue. The catalogue is a handsome one, containing illustrations and specifications of the different boilers manufactured by this firm.

Gas for Furnace Work.

The Power and Mining Machinery Co., 52 William street, New York, formerly the Loomis-Pettibone Gas Machinery Co., have issued a bulletin describing and illustrating their gas generating machinery for furnace work, in which is reprinted an article from the Engineering Record on a plant installed by this company at the works of the Pennsylvania Steel Co., at Steelton.

"Our Sketch Book."

The Springfield Boiler & Mfg. Co., Springfield, Ill., are sending out a very handsome book entitled "Our Sketch

Book." This book contains a number of drawings of the International furnace boiler, which are meant to show the adaptability of this class of boiler, the modifications in design to which it is susceptible and the amount of power that can be developed in a limited space.

Slotting Machines.

The Newton Machine Tool Works, Philadelphia, have issued catalogue No. 38, describing and illustrating their slotting machines, which have been increased in weight about thirty per cent. to meet the requirements of the modern high speed steel.

Steam Heating.

The Union Steam Pump Co., Battle Creek, Mich., have issued a little circular entitled "Hints on Modern Steam Heating," containing an interesting article on the vacuum system of steam heating. They are also sending out a bulletin on condensation and hot water work.

Sheet Steel.

The American Sheet Steel Co., Battery Park Building, New York, have

issued a very handsomely illustrated catalogue describing their products.

Tin Plate Roofing

The American Tin Plate Co., Battery Park Bldg., New York, have issued a booklet giving some technical information concerning the history and manufacture of tin and terne plates for roofing purposes.

Mining Machinery.

The Holthoff Machinery Co., Cudahy, Milwaukee County, Wis., have issued a set of three catalogues, the first describing gold and silver milling machinery, the second illustrating smelting, concentrating and refining machinery, and the third describing boilers and sheet metal work.

The Lee Injector.

The Lee Injector Mfg. Co., Port Huron, Mich., have issued catalogue No. 7 for 1904, in which are illustrated and described a number of improved injectors and valves, placed upon the market by the company during the past year. It also contains an article entitled, "Injectors, Their Uses and Abuses," by Wm. O. Lee.

Air Tools.

The Port Huron Air Tool Co., Limited, have issued a catalogue illustrating and describing their air compressing motors for apparatus such as hoists, drills and cranes.

Parr Calorimeter.

The Standard Calorimeter Co., East Moline, Ill., have issued a small booklet describing and illustrating the Parr standard calorimeter, for determining the heat units in bituminous and anthracite coals, lignites, coke, petroleum, etc.

Gas Engines.

"Gas Engines" is the name of a handsome catalogue issued by the Power & Mining Machinery Co., 52-54 William street, New York, illustrating and describing the American Crossley gas engine.

McCully Crusher.

The McCully rock and ore crusher is described and illustrated in a catalogue issued by the Holthoff Machinery Co., Cudahy, Wisconsin. This firm have also issued a bulletin describing the McCully gyratory crusher.

Business Changes

ONTARIO.

J. W. NEY & CO., general merchants, Bracebridge, have sold out to Hunter Bros.

W. Daly, general merchant, Blytheswood, has sold out to J. W. Cascadden.

N. C. Shook, general merchant, Seeley's Bay, is offering his business for sale.

IVER JOHNSON REVOLVERS



Wherever you see the sign, it stands for revolver supremacy and suggests **IVER JOHNSON PRODUCTS.** Iver Johnson Revolvers have the largest sale of any in the world.

Best Advertised—Best Known.

Send for Catalogue.

IVER JOHNSON'S ARMS & CYCLE WORKS,

New York Office, 99 Chambers Street.

FITCHBURG, MASS.

The business of McDowell & Co., sporting goods merchants, Toronto, is to be wound up.

The stock of E. Braund, hardware merchant, Aurora, was advertised to be sold on May 18.

QUEBEC.

The Dominion Car Door Hanger Co., Quebec, have registered.

Hamelin & Aubin, general merchants, Verdon, have compromised.

G. O. Tousignant, general merchant, Chicoutimi, is offering to compromise.

Paltiel & Frere, general merchants, Chicoutimi, have effected a compromise.

The assets of E. Lemire, carriage maker, Pont de Maskinonge, are to be sold.

The assets of T. E. Flynn, general merchant, Perce, are to be sold on May 25.

The assets of J. L. Roberge & Cie, general merchants, Thetford Mines, have been sold.

J. A. Michaud's sale of general store goods, in Chicoutimi, has been postponed to May 25.

The assets of P. Ouellette & Co., general merchants, Hebertville, are advertised to be sold May 23.

L. A. Nobert, hardware dealer, Louisville, has been burnt out; the loss is partially covered by insurance.

MANITOBA AND N.W.T.

The Williams Hardware Co., Sintaluta, are selling out.

C. W. Stone, general merchant, Carstairs, has sold out.

The Calgary Saddlery Co., Macleod, have sold out to F. Heney.

R. B. McClish, general merchant, Haynes, has sold out to H. Reynolds.

M. S. Murray, hardware merchant, Basswood, has sold out to T. N. Peter.

W. B. Hawke, hardware dealer, Moose Jaw, has been succeeded by Hawke Bros.

Buck Bros., general merchants, Red Jacket, have advertised their business for sale.

M. Worster, general merchant, Shellbrook, has admitted H. I. Lambly to partnership.

Schwartz & Schram, general merchants, Stony Plain, have dissolved partnership.

Edstrom Bros., general merchants, Edberg, have sold their Edensville branch to A. Norberg.

May 21, 1904.

HARDWARE AND METAL

H. S. HOWLAND, SONS & CO.

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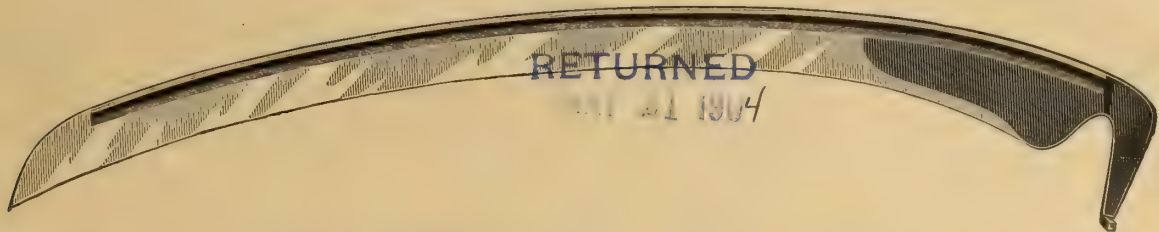
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SCYTHES, narrow and wide heel.
GOLDEN CLIPPER, EXCELSIOR—Cast Steel Lawn and Cradle Scythes.



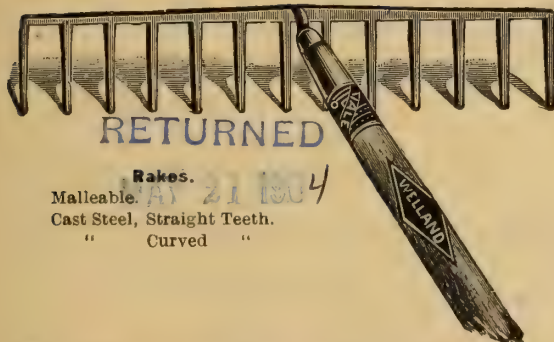
Drive Ring.



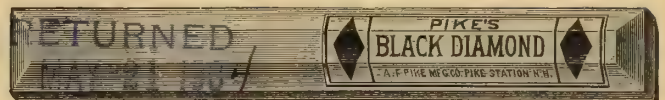
Loop and Solid Plate.



Loop Patent Swing Socket.



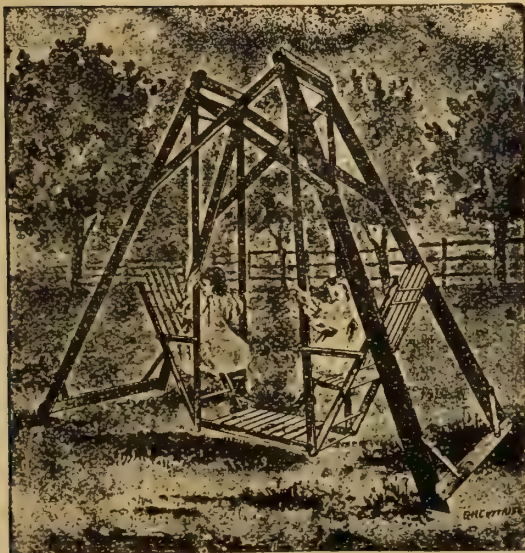
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Malleable.
Cast Steel, Straight Teeth.
" Curved "



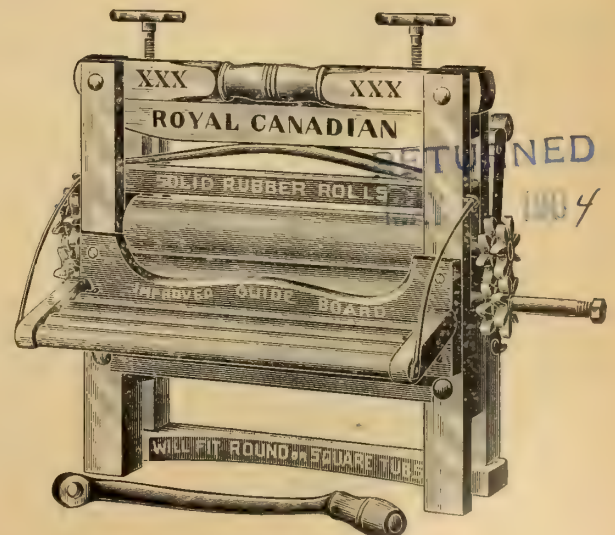
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"Quick-cut" Emery Scythe Stones.



"The Leader" Lawn Swing.



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We Ship Promptly.

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New and Second-Hand Machinery,
Engines, Boilers, Belting, Pulleys,
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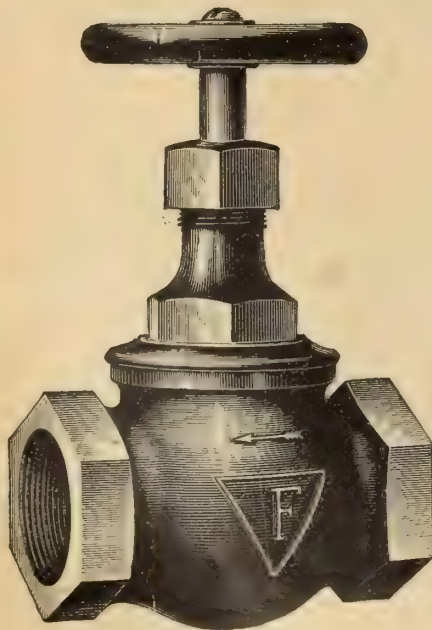
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Door Hangers of every description, Automatic Fire Door
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Ball-Bearing Grindstones, Velox Ball-Bearing Emery
Grinders, Triumph Wire Stretchers, Sash Weights.

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**Some VALVES are good,
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**Fairbanks
Renewable**

ASBESTOS DISC

**Globe Valves
ARE THE BEST.**

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The Fairbanks Company

Montreal

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Vancouver

MACHINERY

THE MACHINERY MARKETS.

Quebec.

Office of **HARDWARE AND METAL**,
232 McGill Street.
Montreal, May 20, 1904.

BETTER business to a considerable extent in small machinery and to some degree in larger machines is the condition of affairs this week. There is more tone and snap to the market and dealers generally are pleased with the week's sales. It is not a boom, but there is a good steady business being done. Besides a brisk trade in smaller lines, several unusually large orders have been placed. These are mainly for railroad equipment and machine shop installation. Quite a number of medium capacity boilers and engines have been sold, and as was the case last week, wood working machinery has been in good demand and several more orders have been reported.

The machinery business, though active, is hardly up to what it was this time last year. As before, shipments are very much easier than they were a year ago, making it a much more satisfactory state of affairs for the machinery dealers.

Ontario.

Office of **HARDWARE AND METAL**,
10 Front street east.
Toronto, May 21, 1904

THERE is a general improvement noted in all lines of machinery, and there is a very decided improvement in some. On the whole, the market situation is very bright this week. Not a few good orders have been closed by local dealers, and enquiries are very encouraging for the placing of numerous orders in the near future.

It is in the wood-working machinery line that the greatest improvement has been noted during the past week. One firm in particular found business in that line exceptionally good, having received several orders for planing mill outfits, besides having some others under negotiations.

Power machinery, such as boilers and engines, has also had a very good run

this week. Several orders for large engines and boilers have been placed with local machinery firms.

The machine tool market has shown an improvement, but not so decided a one as wood-working and power machinery have. It is thought that there will be quite a local demand for machine tools in a short time, when buildings under construction in the burned area are sufficiently completed for firms needing that line of machinery to think about installing.

One local firm expects to get a few substantial orders for hoisting machinery from contractors who are building in the burned area. The hoisting machinery handled by this firm is of American manufacture, and although there is a Canadian manufacturing firm competing with them, they have slight fear of not getting the order, since the contractors are said to favor the American hoisting machinery.

The Best Iron-Working Lathe.

Editor Hardware and Metal: I am glad to note that you have made such progress in the portion of your paper devoted to machinery topics. Many of your readers will, I feel sure, be much interested and helped by this part of your paper.

I would like your opinion on a matter that has aroused some discussion and shown quite a difference of opinion in my shop. What is the best iron-working lathe offered on the Canadian market to-day? Would you say that the Canadian-made lathes are as good (as well worth the money charged for them) as American or other foreign lathes?

MACHINIST.

Hamilton, May 17, 1904.

T. McAvity & Sons' Foundry.

T. McAVITY & SONS, St. John, who for the last year have been remodelling and refitting their foundry, have now one of the most modern plants in the Dominion. The works may be divided into three sections, the

pattern shed, the iron foundry, and the machine shop. The pattern shed is quite new, and is sheathed with fire-proof material that the contents, which at times are of great value, may be more thoroughly protected. The foundry is devoted exclusively to iron castings, and contains a new elevator for the cupola, which, together with the staging and core oven, has been erected during the past year. Nearby is the core room, where some five or six girls are employed, and here, as throughout the building, the firm have fitted up everything for the convenience of the employees.

Passing on to the machine shop, two new emery wheels for grinding the castings, and three tumbling barrels may be noticed. In the shop itself the iron steam fittings, elbows, ties, valves, etc., previously cast, are tapped and finished. Six tapping machines are in use, and two new lathes are just being placed in position.

The motive power for the various departments is supplied by a new 50 h. p. compound tandem Robb-Armstrong engine, which is supplied with steam from a 60 h. p. Robb Mumford standard boiler, having a combination of fire and water tubes, which has proved very satisfactory. In connection with the engine and boiler two somewhat novel appliances are worthy of mention. The Austin oil separator on the engine collects the oil in the feed water, so that by this process of extraction the same water can be used over again. The other appliance referred to is an engine for purifying and heating the water before it is admitted to the boiler. By means of a set of tubes the mud and sediment in the water are collected into a chamber in the bottom of the machine and blown off, thus reducing the incrustation, which is so common in all boilers. The heating of the water at the same time to 110 degrees is also a considerable factor in making quick steam.

The buildings are heated on the Buffalo Forge Co.'s system by exhaust steam from the engine, which passes through a heater for that purpose.

Further additions to the already extensive plant and premises are in contemplation, which will not only mean increased business for the firm, but a considerable addition to the number of employees, of whom there are now about thirty-five at work in the various departments.

A LARGE MARINE BOILER.

A CUT is shown in this issue of one of the largest boilers that has ever been built in Canada. It was manufactured by the John McDougall Co., Limited, at the Caledonia Iron Works, at Montreal, and shows that our Canadian manufacturers are prepared to take large work as well as small.

The boiler shown is one of two tubular return marine boilers of special make, and of the same size and capacity for the Richelieu & Ontario Navigation Co., and when the photo was taken last week was lying on the wharf at the Lachine Canal ready to be loaded on a barge. They have since been taken to Sorel where they are being installed in the steamer *Carolina*. It may be remembered that this boat, which is one of the R. & O. passenger boats plying in the lower St. Lawrence, ran on the rocks at the Saguenay last season. She

purpose specially designed oak skids were made. Twenty men and an engine derrick were necessary to load them on board the barges.

Machinery and Electrical Notes.

Lethbridge Iron Works Co., Lethbridge, have been incorporated.

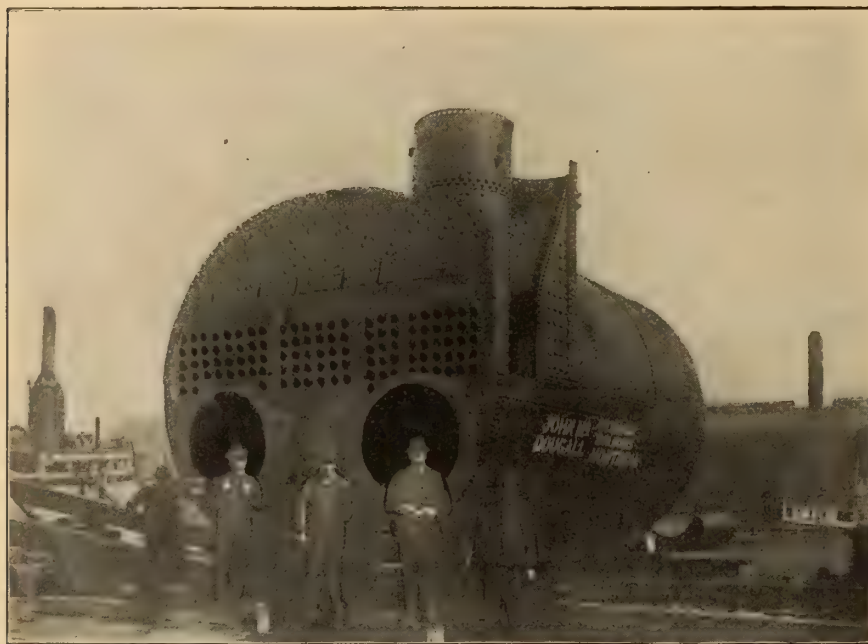
The W. J. Bradley Machinery Co., Toronto, is to be wound up.

Mr. W. Wythe, proprietor of the Toronto Machine Tool Works, is dead.

Telfer, Telfer & Co., electricians, Montreal, have dissolved.

J. Rheume's foundry, Montreal, has been destroyed by fire; covered by insurance.

The Levy, Weston & McLean machinery firm, Toronto, are supplying C. L. Foiler, New Hamburg, Ont., with a complete planing mill outfit.



A Large Marine Boiler.

was cut in two and has since been practically rebuilt, necessitating new machinery.

A few of the dimensions and details of the boiler will be found interesting. It is 14 ft. 4 in. in diameter, 21 ft. long, and is equipped with three Purvis corrugated furnaces, two of which are 42 in. in diameter, and one 36 in. The steam chimneys are 15 ft. high, and 9 ft. in diameter. There are 132 boiler tubes, each $4\frac{1}{2}$ in. in diameter, and 15 ft. long. It is stayed to carry 60 lbs. steam pressure. The total weight of the boiler is 42 tons. It took eight teams to draw them on the snow from the works to the wharf, and for this

O. Desrosiers & Co.'s foundry at Louisville, Que., has been destroyed by fire.

J. A. Hinson, president of the National Car Coupler Co., Chicago, is dead.

H. W. Petrie, Toronto, is supplying the Electrical Development Co. of Ontario, Chippewa, Ont., with a combined engine and boiler.

Coulter & Campbell, George street, Toronto, are having an improved screw cutting engine lathe installed by H. W. Petrie, Toronto.

The Levy, Weston & McLean Machinery Co., Toronto, are supplying T. W.

E. Wood, Orillia, Ont., with a large Dolty compound marine engine, cylinder, 6x9x12.

The Fredericton, N.B., Gas Light Co. are enlarging their plant. At the moment a large brick chimney is being erected.

Fire in the furnace room of the Canadian Foundry, Carrier street, Montreal, did damage to the extent of \$3,500.

The planing mill of J. Kerr, Petrolia, Ont., has been completely destroyed by fire, together with all the machinery.

The Toronto Type Foundry has purchased the business and goodwill of the Linotype Manufacturing Co., Montreal.

The Montreal & Ottawa Peat Co. are installing at Alfred, Ont., a Brown automatic engine and an Erie boiler. These were supplied by H. W. Petrie, Toronto.

The Hobbs Lumber Co., Powassan, Ont., have purchased from the Levv. Weston & McLean Machinery Co., Toronto, a planer and matcher.

The Levy, Weston & McLean Machinery Co., Toronto, have just shipped a carload of American fire-brick to the Hanover Portland Cement Co., Hanover, Ont., and also a carload to the Colonial Portland Cement Co., Wiarton, Ont.

The McDonald-McMillan contracting firm, of Winnipeg, will build a large section of the new grades required by the Canadian Northern Railway this year.

L. K. Jones, Department of Railways and Canals, Ottawa, is asking tenders before May 25 for power and telephone submarine cables for the Welland Canal. Tender forms, etc., can be obtained from R. J. Parke, Toronto.

Tenders are being called for the construction of a bridge, 400 feet in length, over the Grand River, three miles below Galt. Tenders will be received up to May 28 at the Galt Council Chambers.

City Solicitor Mackelean, of Hamilton, makes the proposition that all switching and shunting of cars by the railroads inside the city limits be done by electric power, in order to do away with the noise and dust created in the use of steam power.

J. McLarty, of Detroit, has just started to build at Hanlan's Point, Toronto, a railroad for amusement purposes. It is exactly similar to the one used at the World's Fair. The rails and accessories were obtained from H. W. Petrie, Toronto.

The Fairbanks Co., through their Montreal office, have just closed a large machinery order from the Pere Marquette

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

NEWMAN'S PATENT INVINCIBLE FLOOR SPRINGS

Combine all the qualities desirable in a Door Closer. They work silently and effectually, and never get out of order. In use in many of the public buildings throughout Great Britain and the Colonies.

MADE SOLELY BY
W. NEWMAN & SONS, Birmingham.

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Brass Globe, Standard and Copper Alloy Discs, Steam and Hot Water Radiator Valves, Brass and Iron Weber Gate Valves, Check Valves, etc.

THOSE WHO DO GET SATISFACTION.
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WALKERVILLE, ONT. Limited

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PENBERTHY INJECTOR CO.,
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BRASS MFRS. Windsor, Ont.

TRUCKS

for Warehouse
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Save You Money
Do Men's Work
Draw no Salary

Our Trucks are guaranteed satisfactory.
Turn in their own length.

MADE IN CANADA.

H. C. Slingsby for Canada.

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"Pullman" Lawn Sprinkler

IS YOUR
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Send for Folder No. 14.

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GALVANIZING
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WIND
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THE
QUALITY & PRICE TO SUIT
ALL GRADES OF WORK

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WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



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will please your customers.
No wood to rot or check.

SPECIAL DISCOUNTS TO THE TRADE.

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Head Office and Works, TORONTO, ONT.

District Offices — Montreal, Halifax, Ottawa, Winnipeg, Vancouver,
Victoria, Rossland.



TO POLISHERS.

If corundum be next in hardness to the diamond, and if emery be iron ore and corundum, (as stated by the United States Government Report), will it not pay you to use our pure Craig Mine Crystal Corundum? It is not adulterated with emery.

Write us for Prices.

The Canada Corundum Company, Limited
TORONTO, CANADA.

Railway. The machines are for the new railway shops at St. Thomas, Ont. They include a complete railway shop equipment, consisting of lathes, planers, drills, car wheel borers, etc. The aggregate value of these machines is \$60,000.

A. Box, of Toronto, an expert moulder, who has had charge of one of the largest shops in Canada, has now taken charge of the moulding department of the National Manufacturing Co.'s business in Pembroke. The National Manufacturing Co. are putting in all the latest improved machinery for the manufacture of cream separators.—Pembroke Advocate.

Robert Ross, consulting engineer, Montreal, has been engaged by Kingston to give an estimate of what it would cost to put the electric plant of the Light, Heat & Power Company in first-class repair, and to make it sufficient for supplying power to the Kingston Street Railway Company.

The contract for the installation of the boilers in the new mining and chemistry building of the Ontario School of Practical Science has been awarded to Purdy, Mansell & Co., Toronto. The lowest tender was not received from this firm, but from the Toronto Furnace Co., and the reason that the Ontario Department of Public Works gave the contract to Purdy, Mansell & Co. instead of to the Toronto Furnace Co. was that the boiler the latter firm proposed to instal is built in the United States, whereas it has always been the policy of the Department to favor Canadian-made goods whenever possible.

Bursting of Cast Iron Valves.

A WRITER in one of the French journals describes in detail a number of accidents due to the bursting of cast iron valves in steam pipes, which have happened in various steam plants in France in recent years. The accidents have in most instances happened where steam has been admitted into a pipe, or range of pipes which contained water of condensation, and have in general been attributed to water hammer. While agreeing that in many cases the water acting as a liquid piston may be dashed with great velocity against a valve or blank flange, and thus cause fracture, the author maintains that the action is not responsible in every case for the fracture. Experiments show that if steam at 70 lbs. per square inch be admitted to a pipe twenty-three feet long and one foot in diameter, slightly inclined

CONDENSED MACHINERY ADVERTISEMENTS.

MACHINERY WANTED.

Notices under this heading inserted free for subscribers to **HARDWARE AND METAL**.

BAND saw, jig saw and jointer. Box M. 7, **HARDWARE AND METAL**, Toronto.

BOILER WANTED—Good second-hand boiler—54 x 12, or 60 x 12; quote lowest cash price. Box M. 8, **HARDWARE AND METAL**, Toronto.

GOOD second-hand three-side moulder and iron rip saw table; give full particulars. Otterville Manufacturing Co., Limited, Otterville.

LATHE, screw cutting, about twelve-inch swing; must be in good order. Box M. 10, **HARDWARE AND METAL**, Toronto.

STEAM ENGINE WANTED—About 7 h.p., stationary. Address, with particulars and lowest price, Box M 12, **HARDWARE AND METAL**, Toronto.

WANTED—18-in. turret lathe; second-hand, if in good condition. Box M 13, **HARDWARE AND METAL**, Toronto.

WANTED—Second-hand gasoline engine—tn good repair; 2 to 4 horsepower. Box 8, Markham.

WANTED—Immediately—Portable sawmill—to cut from three to five million feet mixed timber, principally birch; would prefer party who would take timber from stump and deliver lumber at station. Hanna & Hutcheson Bros., Huntsville, Ont.

WANTED—Good second-hand jointer and rounder. E. McNabb, Arva P. O., Ont.

WANTED—Hydraulic press; capacity at least 200 tons. Address, giving size and full particulars, to Box M 11, **HARDWARE AND METAL**, Toronto.

MACHINERY FOR SALE.

Special rates will be quoted for notices under this heading for periods of three months or longer.

A GASOLINE ENGINE—That has stood the test and proven to be the most economical ever operated in America. Made by Tuerk Iron Works, Berlin, Ont.

BLACKSMITH'S tools, stock and woodworking tools in first-class shape. Apply G. H. Morris, Hatchley P. O.

COMPOUND engines—high and low pressure; high speed, John Ingles, maker, Toronto, 125 horse power; also alternating, incandescent dynamo, five hundred light; all in first-class condition; lately used in Grimsby electric light plant, now using current from Cataract Power Company, and engine and dynamo are no longer required. Apply to J. W. Vandyke, Grimsby, Ont.

ENGINES—Gas, gasoline, stationery and marine. E. Housev, manufacturer; 815 Queen west, Toronto.

FOUR double drum hoisting engines for immediate delivery; with or without boilers. H. W. Petrie; Toronto.

ELEVATORS for freight and passenger service. Write for particulars to Parkin Elevator Works, Hamilton, Ont.

ESTIMATES given on forced and induced draft fans for steam plants. Steldon & Sheldon, Galt.

GAS and gasoline engines, stationary, marine, automobile; also launches; silver medal, highest award Dominion Exhibition, Toronto; also Toronto Exhibition, 1902; write for catalogue. The Gasoline Engine Co. of Toronto Junction, Limited.

HEAVY portable engines—21 to 50 h. p.; on wheels or skids; for sawmill work; prompt delivery; low prices; send for catalogue. The Robert Bell Engine and Thresher Co., Limited, Seaforth, Ont.

HOISTING ENGINES, derricks, continuous concrete mixers, 250 yards capacity; dump cars, railway construction cars, track-laying tools, boilers, etc. Marsh & Henthorn, Belleville, Ont.

MACHINE TOOLS—I have for immediate delivery a large stock of lathes, planers, shapers, millers, radial and other drills, punches and shears, bolt cutters, hammers, presses, etc., etc.; send for stock list. H. W. Petrie, Toronto.

NEW STATIONARY ENGINES—20 x 24 Waterous sawmill engine; 14 x 18 Waterous sawmill engine; 9 x 10 McEwen engine; 13 x 14 McEwen engine. Waterous, Brantford.

PATENT, well introduced; big money to live man acquainted with machinery or mechanics. Fred. R. Cole, 138a St. James street, Montreal.

ROCK DRILLS for waterworks excavating, quarries and mines; steam hoists for builders, mines and quarries; simple, compound and triple marine engines, for pleasure launches. The Dominion Rock Drill Co., Napanee, Ont.

SIX horse-power engine and boiler, cheap; three horse gas engine, seen working. 102 St. Lawrence street, Montreal.

THE A. R. WILLIAMS MACHINERY CO., Limited, Toronto, have for sale for prompt shipment the following: Two 10" four side moulders, new; 42" new sand papering machine; new 40" Cowan resaw machine. Send for prices.

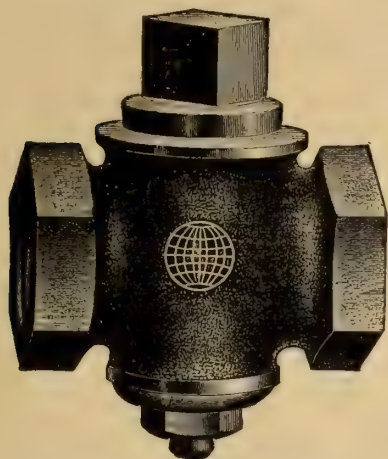
THE FAIRBANKS CO.—Temporary warehouse, 124 Bay—standard scales, valves, trucks, letter presses, shafting, hangers, pulleys, belting, mill supplies, machine tools; "Fairbanks" gas and gasoline engines; write for price list.

THE STUART MACHINERY CO., Winnipeg—One second-hand return tubular boiler, 60" x 14 feet, good as new; one 12x30 Corliss engine, second-hand, John Abell make, in first-class shape; one second-hand Barnes 19 inch swing, 8 foot bed, iron lathe, foot power; one second-hand iron lathe, 24-inch swing, 10 foot bed.

AGENCY WANTED.

WANTED—To secure agency in Manitoba town for modern gasoline engine; state terms and commission. Box M 14, **HARDWARE AND METAL**, Toronto.

"GLOBE"
STEAM and GAS
COCKS.
"GUARANTEED SATISFACTORY."



Catalogue "C" and Discount
Sheet on application.

The Globe Brass Works
Detroit, U.S.A.

MADE IN CANADA



**Stitched Cotton
Duck Belting**

Superior to all others.
FOR

Agricultural Machines, Elevators,
Pulp and Paper Mills, Cotton, Woollen,
Cement and Saw Mills, Machine Shops
and Electric Powers.

MANUFACTURED BY

DOMINION BELTING COMPANY

HAMILTON, CANADA, Limited

USE OUR

"MAPLE LEAF BELT DRESSING"

WRITE DIRECT
IF YOUR
DEALER DOES
NOT HAVE IT.

Let us convince
you that

**Manganese
Anti-Friction Metal**

is the best Babbitt Metal
your money can buy, by send-
ing you enough to fill your
requirements. We take all
the risk.

Every pound guaranteed.

Syracuse Smelting Works,
Montreal,
New York,
Seattle.



H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
Steel and Twist Barrels
Superior in Design, Workmanship
and Finish, and the most popular
Gun on the Market.

Simplest
"Take Down"
Gun Made



HARRINGTON & RICHARDSON ARMS CO.
Also makers of H. & R. Revolvers.
Catalog on request. Worcester, Mass., U.S.A.

CELEBRATED **HEINISCH** SHEARS

Tailors' Shears,
Trimmers' Shears,
Tinners' Snips, etc.



ACKNOWLEDGED THE BEST.

R. HEINISCH'S SONS CO.

NEW YORK OFFICE, 155 Chambers St
NEWARK, N.J., U.S.A.



SEYMOUR SHEARS

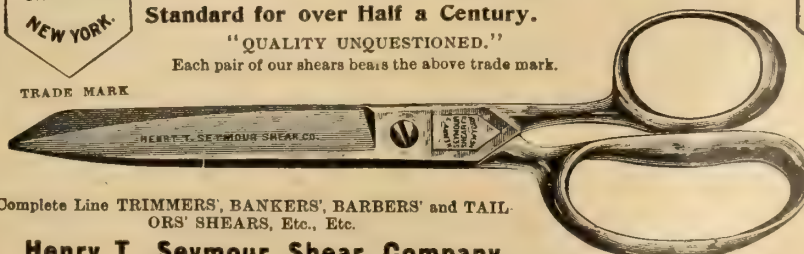
HAVE BEEN THE

Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



Complete Line TRIMMERS', BANKERS', BARBERS' and TAIL-
ORS' SHEARS, Etc., Etc.

Henry T. Seymour Shear Company.

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.



TRADE MARK

Latest Cata-
logue will be
sent in
exchange for
your business
card.

and containing water to a depth of nine inches, shocks take place, and when the pipe admitting steam was three and one-eighth inches in diameter and the steam was admitted above the water surface, the pressure was raised to 400 lbs. per square inch by these shocks. Still higher pressures were obtained by using a two and one-half inch pipe, and by leading the steam into the main pipe below the surface of the water.

In another experiment steam was led at 150 lbs. per square inch into a reservoir into which cold water was injected by a tube one and seven-eighths inches in diameter and four feet nine inches long, perforated for the second half of its length. Violent shocks were produced corresponding to each stroke of the feed pump, and these shocks continued even after the pump stopped. They are attributed to the sudden condensation of steam upon the surfaces of the jets of water issuing from the tube. In one particular accident which happened to a valve it seemed impossible that the rupture was due to water hammer. In the first place, the range of pipe was well drained, and the drains were fully opened just before the accident. Following are the circumstances of the accident: The particular engine to which this valve admitted steam had been standing for some hours, so that water would have accumulated in a short vertical length above the valve. The horizontal pipes were well drained by drain pipes at intervals of about twenty-two feet, leading to a steam trap. On wishing to re-start this engine the cock which drains this horizontal pipe was opened and the valve in question opened and a series of violent shocks were felt which finally caused a rupture of the valve body.

The following seems to be an explanation of the accident: When a mixture of steam and water at a high pressure and temperature expands to a lower pressure adiabatically the proportion of water in the mixture is increased, the temperature falls and mechanical work is done. In the accident it may be assumed that there were still some pounds of water in the vertical ledge of the pipe above the valve when the valve was being opened. This water would be at a high temperature, since the steam with which it was in contact was at 155 lbs. pressure, and on opening the valve the pressure would be suddenly reduced and a sudden violent expansion of the mixture of steam and water would take place, with an accompanying transformation of heat into mechanical work in the form of kinetic energy. The cast iron in the valve being unfitted to stand shocks of this kind, rupture took place. To avoid accidents of this description the writer advised the fitting of by-pass valves between the two sides of any large steam valve, so that the pressure in the two sides might be equalized before the main valve is opened.

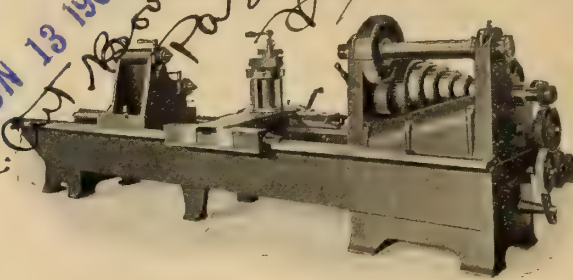
DOUBLE-SPINDLE LATHE.

AN illustration is given herewith of a new style heavy pattern double-spindled lathe, manufactured by J. J. McCabe, New York, and sold by the Fairbanks Co. in Canada.

This machine is a new design, with changes in the head stock and rearrangements of gears that add greatly to the rigidity and increase the power twenty-five per cent. The head stock is very wide on the base and rigid in construction. The base is scraped to a flat bearing on the ways of the bed and is held down by six cap bolts, four adjusting screws are tapped through the flanges where the head stock sets between flat ways of bed, and the fit is made to 1-32 of an inch at this point; this allows the head stock to be adjusted slightly in order to properly align the spindles, should the lathe bore taper any time owing to the wear of the boxes. The bed is wide, so that head or tail stock do not overhang and

made flush without any projections, and is planed and slotted for clamping large pieces in boring. It is powerfully geared, so that it can be operated conveniently, and has quick traverse along the bed with hand wheel of large diameter. The compound rest has sufficient traverse to face full swing on upper spindle without shifting the tool or losing any of the bearing. Blocking pieces for compound rest bring the tool level with the upper spindle, and is made so that it can be quickly taken off, and the rest set down in its regular place. The screw-cutting range is double that of the ordinary lathe, the lead screw being made of a very fine grade of high carbon steel. The friction feed is driven with splined screw, the threads of the lead screw being used for screw-cutting only. The feed is driven by gearing and admits of three changes without moving the gears; and by reversing the position of gear on end of lower

spindle and the second gear on stud, three additional changes can be obtained, making six changes of feed without using the regular gears, that will give almost any feed required. The feed is engaged by a hand-wheel large in diameter, so that it is an easy matter to tighten the friction by hand sufficient to carry the heaviest cut. The tail



Double-Spindle Lathe.

are perfectly rigid in handling heavy work upon upper spindles. The boxes are of hard bronze of extra length, carefully fitted and scraped to a perfect bearing, and the thrust of the spindles is taken on hardened and ground tool steel washers.

The spindles are large in diameter and made from a high grade of hammered steel, of about forty-five points carbon. The lower spindle has a 2 1-8 inch hole clear through, and the centres are of tool steel. The cone is large in diameter and has five sections. The gearing is strongly proportioned throughout, of course pitch, wide face, and accurately cut. The lower spindle is back-geared in the usual way, and the upper spindle has double the power, being triple geared. The internal geared face plate, with a ratio of about 72 to 1, can be furnished as an extra for unusually heavy work in place of large plain plate, as it answers the purpose of both plain and geared. The carriage is gibbed front and back, and the top is

stock is fitted with a taper gib on the front side to take up wear, and is securely held with two binders and four bolts. An improved device for tapping spindles is used that overcomes the necessity of splitting the casting at this point.

With this lathe beds of any even length from 10 to 40 feet can be furnished. The machines handled in this style by the Fairbanks Co. are in four sizes, with swings of 24 to 40 inches, 26 to 44 inches, 26 to 48 inches, and 32 to 54 inches. The new features that have been added and the material and workmanship that are guaranteed make this a thoroughly modern high-grade tool.

Good Order for Belting.

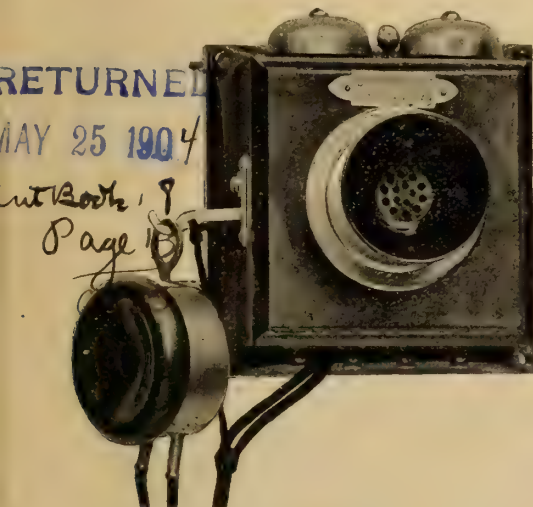
Sadler & Haworth, manufacturers of belting, etc., Montreal and Toronto, have secured the contract for the leather belting for the International Portland Cement Co., Ottawa and Toronto, for their new plant at Hull, Que., the order aggregating about 7,000 ft. of single and double belting. This is the second large order Sadler & Haworth have had from this firm, having fitted up their

ELECTRICAL GOODS AND SUPPLIES

The Duplex Telephone.

THE illustration shows the "Duplex" telephone which is being put on the Canadian market by John Forman, Montreal. These telephones, which are very small (only $4\frac{1}{2}$ inches by $4\frac{1}{2}$ inches), are designed specially for private use between offices in buildings, neighboring houses, or house and barn. They are more particularly intended for a good house telephone, and for this purpose they are very finely finished and have a long distance transmitter.

These telephones are guaranteed to talk as far as any battery telephone and



their great advantage is that they are as easily installed as an electric bell. They are not much more expensive than an electric bell, a fact which counts for a great deal with prospective customers. No experience in telephone work is necessary to instal these 'phones, as the work is simple and complete instructions accompany each outfit.

This is an example of a line of goods which should interest hardware merchants and which would make good selling articles for the above requirements.

Desk telephones to go with the above are kept in stock by the same house and also some new styles in intercommunicating warehouse telephones. Quotations and circulars are cheerfully furnished.

Money in Electrical Goods.

THERE is money in it. This is the all-embracing, all-sufficient reason why the hardware merchant should stock electrical goods. It is, moreover, money that is easily earned, for the

goods are not hard to sell in a hardware store. And this is an additional inducement of no small importance.

The wise hardware merchant will select a stock of electrical goods with a view to the requirements of his own constituency. In adding a new line he will buy liberally but not rashly until he has discovered by actual experiment what goods will sell most readily to his own customers. Goods which are suitable for a city trade may not be adapted to the requirements of a country town. Common sense must be exercised, of course.

But it should be an easy matter to select from the stock of the various electrical supply houses a line of electrical fixtures of moderate price with which to make the experiment. The investment need not be very large at first until the merchant has satisfied himself by actual results that he is on the right track.

It is not necessary to make a large investment at first for a beginning can be made with the staple lines. There is much in electrical goods which is just as staple as nails but much more profitable. The public are always buying these goods just as they buy any staple and a steady sale is assured when once the hardware merchant has taught his customers to look for these goods in his store. People are continually buying new incandescent electric lamps and there is no reason why the electric light company in a country town should have a monopoly of this business. There is every reason why the hardware merchant should sell these lamps, and they will give him a start in the development of a more extensive trade in kindred lines. The customer who buys an incandescent lamp in a hardware store may easily be educated to look to that store for fixtures.

The possibilities of development in the electrical goods department of a hardware store are immense, and the first steps will easily suggest themselves. For example, the reason why more people who use electric lighting do not make use of the various new conveniences connected therewith or buy fancy fixtures is that their attention has not been persistently directed to these goods in the stores where they make their other purchases. The proper display of these goods in the hardware stores

would readily make sales among people who never thought of making such purchases.

Fixtures range in price from the very cheap to the very dear, and in making his first selections the hardware merchant must always bear in mind the purchasing abilities of his customers. A careful study of the different electrical supply catalogues will give him many valuable hints. Some houses prepare catalogues specially for the hardware trade illustrating the lines which, in their judgment, can most easily be handled by hardware merchants. Most of these catalogues are prepared at considerable expense, no trouble being spared in making them as complete as possible in all respects.

It is necessary, of course, to carry a good stock in order that the variety may attract customers, but in special instances there should be no difficulty in making sales from the catalogue and ordering specially for a special customer.

Of the immense variety of electrical novelties, many of which would make quick sellers in a hardware store, more will be said later on. But the merchant who is making a beginning will make no mistake in ordering first lamps and fixtures. Other lines will suggest themselves as his electrical business expands.

Pumping by Electricity.

The Bureau of Water Supply in New York has made a report on the use of high pressure fire service for Manhattan. It calls for an appropriation of \$5,425,400, which the board of aldermen has voted for the purpose. The idea is to provide both fresh and salt water for fire and street flushing purposes. As between the three powers—steam, gas and electricity—the latter is decidedly favored. The mechanical efficiency of gas and electric plants are reported as the same. In comparing the use of gas and electricity as the probable source of energy for pumping, the following points were brought out in favor of electricity: Economy in first cost of machinery and buildings; economy in space for installations, therefore reducing cost of land required; economy in cost of wages, maintenance, repairs and renewals; simplicity.



White Mountain Ice Cream Freezers

are well-known, sell quickly
and give good satisfaction.

Model Refrigerators.

Leonard Refrigerators.

Model Oil Stoves and Ovens.

Boss Gasoline Stoves.

We can ship these seasonable goods
promptly. Write for printed matter.



The Model.

The McClary Manufacturing Co.

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B.

"Everything for the Tinshop."

HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN,

Montreal.

The MacLean Publishing Co. Limited

Publishers of Trade Newspapers which circulate in the Provinces of British Columbia, North-West Territories, Manitoba, Ontario, Quebec, Nova Scotia, New Brunswick, P.E. Island and Newfoundland.

OFFICES.

MONTREAL	- - -	232 McGill Street. Telephone Main 1255.
TORONTO	- - -	10 Front Street East. Telephone Main 2701.
WINNIPEG, MAN.	-	Room 308, McIntyre Block. Telephone 1846. L. P. Luxton.
LONDON, ENG.	- -	88 Fleet Street, E.C. J. Meredith McKim.
MANCHESTER, ENG.	-	92 Market Street. H. S. Ashburner.
ST. JOHN, N.B.	- -	No. 3 Market Wharf. J. Hunter White.
NEW YORK	-	Room 1241 New York Life Bldg. W. T. Robson.
VANCOUVER, B.C.	-	Geo. S. B. Perry.

Subscription, Canada and United States, \$2.00.
Great Britain and elsewhere - - - 12s

Published every Saturday.

Cable Address { Adscript, London.
Adscript, Canada.

INJUSTICE TO CANADIAN GOODS.

NUMEROUS and ingenious are the schemes adopted by foreign manufacturers to escape or to at least lessen the effect of the customs duties on their goods on entry to this market.

A case in point has come to light in connection with the plumbing trade. For many years baths have been divided into two classes: 1st quality or "A," and 2nd quality or "B" baths. The "B" bath had always been known as one with defects so noticeable that they could never be sold as "A" baths.

Some of the United States manufacturers, however, decided this arrangement was unsatisfactory to them so they determined to put into effect a new system. They took a number of "A" baths and decided that, as far as the Canadian customs' officials were concerned, these should be called "B" baths. Accordingly sale was made at a figure which was decidedly low, even for "B" baths. They were passed through the customs as "B" baths and treated as such until the plumber was about to instal them, when suddenly they became "A," 1st quality, goods again. By this means a considerable saving in duty was effected and the

United States manufacturers were enabled to bring their goods into this market at a price much below their real value.

This is a manifest injustice to the Canadian manufacturers of earthenware plumbing goods. They are forced by these "slaughter" methods to sell at prices which are not remunerative. The duty of 30 per cent. is ample protection if business be conducted on straight, honest lines, but it is not sufficient if by a subterfuge the value of the protection is to be cut almost in two.

It is only fair to the Government to say that when the foregoing facts were laid before them they recognized the injustice done to the Canadian manufacturer and promised to stop in some way the present system of undervaluation. This can best be done by making the regulations so explicit that it would be impossible to bring in an "A" as a "B" bath, or for the importer, after passing the bath through the customs as "B" quality to sell it to his customer as an "A" bath. If the manufacturer were, for instance, compelled to stamp the grade of quality on his product before entering them in this country the difficulty would be overcome.

TRADE WITH MEXICO.

DIRECT steamship communication between Canada and Mexico has been strongly agitated recently, and Signor Santiago Mendez has visited Ottawa on behalf of the Mexican Government to negotiate with Sir Richard Cartwright, the Minister of Trade and Commerce. It will be remembered that shortly after the Liberals reached power in 1896, a commissioner was sent to Mexico to look into the actual and possible trade issues between the two countries. This may have been the first cause of the awakening.

To-day Canadian trade with Mexico is very trifling. The whole volume of imports amounted to \$125,575 last year, embracing coffee, dyes and chemicals, fruits and tobaccos. We sold to Mexico in the same period exports amounting to \$137,034, which included manufactured cottons, machinery, gunpowder, and a few other articles, making a total

trade for both countries of \$262,609, or a trifle over a quarter of a million dollars. It would take a good deal more than that amount of trade to induce any company to start a steamship service direct, more especially as Mexico does not seem to be a very industrious commercial country. Their total trade with the whole world amounts to a little more than eighteen million and a half dollars per annum, and more than one-half of this trade is done with Great Britain.

Last Winter Sir William Mulock visited Mexico, and there discussed trade questions with President Diaz, and other public men. There then seemed a readiness on the part of the Mexicans to encourage trade with Canada, and a willingness was shown to share equally the cost of inaugurating a steamship service between the two countries. This attitude has appealed to the Canadian Government, no doubt, as already it has been announced from Ottawa that there is a possibility of monthly sailings, both on the Atlantic and the Pacific. This should open up a new market for Canadian flour, bacon, fish, lumber and coal, and on the other hand the Mexicans will try to export to us many things we do not produce.

Canadian manufacturers and merchants, however, have to give their opinion regarding the service before it will be inaugurated by the Government. It is quite likely they will favor the service, more especially because they have been handicapped in New York by inadequate steamship facilities, not only to Mexico, but to Central and South America.

AN AXIOM IN ADVERTISING.

A FACT which all advertisers should bear in mind is that the chief result of good advertising cannot be seen at the moment. To be most effective it must be educated. Education is not a matter of impulse, of the decision of a moment; it is the teaching of weeks, even months or years, culminating in knowledge and conviction. Let a manufacturer convince the Canadian hardware trade of the merit of his goods and he can depend on the stability of his business.

THE WESTERN MERCHANTS' INTERESTS.

IN a country like Canada it is natural that there should be a great diversity of interests and consequently a wide difference in the methods adopted by merchants in various sections. For instance, the hardware dealer in mining districts like the Kootenay and the Sydneys will carry a stock different in many ways to that carried by the hardwareman in a pioneer Manitoba town where wheat raising and building operations constitute the entire means of livelihood for his customers.

Yet notwithstanding this diversity the primal interest of the hardwareman is the same. Practically every hardware dealer in Canada, whether his store be situated in the Yukon, the Territories, a busy manufacturing town in Ontario, or in the peaceful "Annapolis Valley" of Nova Scotia, is vitally interested in, for instance, the market reports published from week to week in *Hardware and Metal*. Each and all find it necessary to keep in close touch with the market reports on nails, oils and turpentine, building materials, household supplies, etc.

In the main, too, the methods of conducting business are the same. The suggestion given to the hardware dealer in the average town regarding the necessity of window dressing may apply in equal degree to the merchant who has the only store of his kind in his village. Yet it applies in some degree, and the retailer in the village will never fail to benefit from reading an article addressed to the city or town dealer. In the same manner the city retailer can always profit from the experience of the village merchant. Technical hints which interest a tinsmith in the largest centre are bound to be of equal value to the metal-worker who does all the eavetroughing, tin-roofing, etc., for miles round his store and is not kept busy even at that.

In the same way hardwaremen in all parts of the Dominion are interested in the same advertisements, in the same announcements of new goods, and the discussion of the merits of old lines. The advertiser who can interest one hardwareman can safely count on inter-

esting in greater or less degree every progressive hardwareman in the Dominion. If some manifest interest and others do not the difference lies in the men who read, not in the districts in which they conduct their business.

It has been the frequent experience of advertisers in *Hardware and Metal* that replies to their advertising come from all parts of the Dominion in almost equal degree. If there is any part of

One Advertiser's Experience.

Editor *HARDWARE AND METAL*: During the recent business trip I made with the Canadian Manufacturers' Association through Manitoba and the Canadian Northwest to the Pacific coast last September and October, I made special enquiries on the occasion of many interviews held with representatives of the hardware trade at various points, as to whether they noticed or read our advertisements in *HARDWARE AND METAL* as they appeared from time to time.

I was gratified to learn as the result of these inquiries, that not only did your paper have the largest circulation among the hardware trade, but I cannot recall an instance where it was not known, nor where our advertisements had not been taken note of.

This information was, of course, interesting to us as advertisers, and justified the confidence we have always had in the merits of *HARDWARE AND METAL* as a reliable medium for securing current information pertaining to the hardware and allied trades; and also as the best to use for advertisements designed to reach and interest the Canadian hardware trade.

We shall have, therefore, much pleasure in continuing the use of your columns, and in recommending same as one well worthy the confidence and support of those who wish to reach the hardware and metal trade in Canada.

From our experience of several years as users of its advertising columns for our business, it has proved to be satisfactory to us.

CANADA HORSE NAIL COMPANY

WM. SMAILL,
Secretary-Treasurer.

the country from which response comes more quickly than from others, it comes from the west, from Manitoba, the Territories and British Columbia. The circulation of *Hardware and Metal* has for years embraced practically every hardware dealer of any consequence from Sault Ste. Marie to Victoria. The western retailers are ever on the alert for new lines, consequently the response from the west to advertising in this paper.

Hardware and Metal has no rival as a medium between advertisers and the western hardware merchant, and our claim for supremacy in this field is admitted by our advertisers and any others who have made a study of the situation.

The statement of Mr. Wm. Smaill, of the Canada Horse Nail Co., Montreal, one of the shrewdest manufacturers of the Dominion, published on this page, may be cited as the verdict of an advertiser who took great care to examine the merits of this paper's circulation and influence in the west.

TRADING STAMPS MUST GO.

APPARENTLY the blow has fallen on trading stamps in Montreal.

At the meeting of the City Council on Monday, an amended by-law prohibiting their use was passed, and will go into effect as soon as the Mayor signs it. It has been explained already in *Hardware and Metal*, that on May 1 a former by-law on this subject, adopted a year ago, was to have gone into effect, but owing to some slight flaw, technically, it was found to be defective in two or three points. The old by-law would have infringed on the individual rights of merchants and others to use stamps, if they wish to do so at their own expense. All is covered by the new by-law, which stops the organized distribution of such stamps, not by a merchant to customer, but by merchants to other merchants, in return for certain considerations. The text of the new by-law is as follows:

"Section 1.—No person, firm or corporation in the City of Montreal shall give, sell, distribute or receive any trading stamps or coupons, nor shall any person employ similar means nor resort to similar devices, which may be construed as equivalent to or as having the same effect as the said trading stamps or coupons.

"Section 2.—No person, firm, company or corporation shall, in the said City of Montreal, carry on or pursue the trade of such stamps or coupons, or other similar devices, or their equivalent, or that which may be construed as having the same effect.

"Section 3.—The prohibitive provision contained in Sections 1 and 2 of said By-law No. 301 shall not apply in the City of Montreal, to any merchant or manufacturer who places in or upon packages of goods sold by him, or delivers to the purchaser of such goods, sold or manufactured, tickets or coupons to be redeemed by such merchant or manufacturer, either in money or merchandise.

"Section 4.—Any person infringing any of the prohibitive provisions contained in Sections 1 and 2 of said by-law No. 301, shall be liable to a fine not exceeding twenty dollars (\$20), and in default of payment, to imprisonment for a term not exceeding three months.

"Section 5.—This by-law shall be considered as forming part of said by-law No. 301 to all intents and purposes."

Mr. James E. Wilder, proprietor of the Traders' Advertising Co. Green Cash Receipts, being interviewed, stated that the action of the City Council in amending the by-law would in no way interfere with continuing business, and that conditions now in Montreal were the same as they were in the City of Quebec a year ago, where the Traders' Advertising Co. have a branch. About a year ago the council of that city passed a by-law similar to the one passed by the council in Montreal. An injunction was at once served by the Traders' Advertising Co. to prevent the by-law from being enforced. The business has been carried on in Quebec the same as usual during the past year, and will be continued in Montreal until the highest courts of Canada decide against it. Several judgments of late have been rendered in the United States, and in every case they have been in favor of the trading stamp companies. The Act passed allows any person or company to give trading stamps or coupons, providing the party giving them redeems same himself. The only question to be decided by the courts is whether the third party has a right to redeem stamps given out by another. The Traders' Advertising Co. claim that any Act to prevent a third party from redeeming such stamps or coupons is

null and void, and they claim it would be as reasonable to pass an Act prohibiting a bank from honoring a cheque drawn on them by another party.

An injunction was granted the Traders' Advertising Co. on Tuesday to prevent the enforcing of the new city by-law.

AN UNUSUAL SIGHT.

A visit to the Cowan Avenue Rink, which is serving as temporary premises for H. S. Howland, Sons & Co., Toronto, would not fail to be of great interest to anyone interested in the hardware trade. Here, in less than a month, this firm has assembled practically all the stock necessary for their wholesale trade in hardware and metals. So complete is their stock that they have been able to fill many large sorting orders, some of carload quantities and some going through to British Columbia. From the gallery of the rink or from the office at the eastern end one gets an unusually good impression of the constant activity and life in a large wholesale hardware house.

BRITISH COLUMBIA LUMBER TRADE.

By G. S. B. P., Vancouver.

INTEREST will be aroused in many sections of Canada by the announcement that the principal boards of trade in British Columbia have taken a decided stand in regard to the tariff on lumber entering Canada.

The desire to have a duty imposed on lumber coming into Canada, at least equal to that on lumber going from Canada into the U. S., has had its justice most clearly demonstrated by the fact that the agitation has practically been taken out of the hands of the lumber trade alone. There is not a class of business men who have not taken the matter up keenly. Every board of trade in the province has met, some of them in special session, for the purpose of expressing their strong approval of the request that some measure of protection shall be extended to an industry which is of such vital importance to the Province of British Columbia.

Resolutions have been passed by all the boards of trade and other public bodies which have dealt with the matter calling on the Dominion Government to take some action to put the lumber manufacturers of the province on

at least a fair footing with those of the U. S., who are exploiting the market which of right belongs to the lumber industry of the Pacific Province. The extent to which the invasion of the Northwest and Manitoba market by the lumber mills of the western states has gone can be judged from the fact that it is asserted on pretty well-posted authority that nearly 10,000,000 feet of U. S. lumber were delivered in the Canadian Northwest during the month of March. The mills of the province simply cannot compete with people who are using this field as a dumping ground for their overcut of lumber for the deliberate purpose of protecting their own home market, which is safely fenced round from possibility of invasion from this side of the line by the Dingley tariff.

The agitation has entirely ignored politics, party or any other sort. It is a general and spontaneous direction of the efforts of every public-spirited man in business in the country to seek some needed relief for the important industry which is not getting the same show in its own country that the mills of a foreign country get. A circular has been issued on behalf of the lumber manufacturers of the province, setting forth concisely their views. It is pointed out that the protection of home industries is the avowed policy of both political parties in Canada, that the only industry in Canada not protected is the manufacture of lumber and shingles, which are perhaps the means of livelihood of more people than all others in this province. The western mills of the U. S. have a large and protected market for all their finer grades of lumber, so that with rough lumber admitted free to Canada they can afford to sell lower grades and part of their rough lumber cheaper, here, especially when the stock sold represents a surplus cut of their mills.

The circular then deals with the U. S. customs tariff, which is 30c per M on shingles and \$2 per M on rough lumber. In addition to this the lumbermen of Washington have convinced the local customs collectors in that state that under the provisions of the Dingley tariff they must impose an additional duty of \$5.50 per M on B. C. lumber, which they are collecting. They have also made strong representations to the U. S. Government asking for the increase of the duty on shingles to \$1 per M.

The circular concludes by pointing out that the lumbermen have appealed from year to year without effect, as they have foreseen the inevitable flooding of the local market whenever an industrial depression threatened in the U. S.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, May 20, 1904.

BUSINESS is decidedly brisk in the hardware line at the present time. Not for some time has trade been as good or have dealers been as rushed with orders. There is a marked activity in nearly all lines, and particularly in the goods usually associated with Spring trade. Dealers on all sides are gratified with the volume of business that is being done, and are actively engaged in filling their numerous orders.

The gun trade has picked up to quite an extent, but there is a shortage of single-barreled in some numbers. There is not such a marked shortage in screws as there was last week, and the manufacturers have almost caught up with the demand for wire nails that have been reported scarce for several weeks. Shipping facilities are said to be good and no trouble is experienced in sending goods, whether by boat or rail. Collections are reported very good and payments much easier. There is no change whatever in prices this week.

Washing Machines—Prices are steady with a fair demand at the following quotations: Round (three legs), \$35.00 per dozen; round (four legs), \$39.00 per dozen; square (regular size), \$42.00 per dozen; square (smaller size), \$36.00 per dozen; round rotary, \$56.00 per dozen; square rotary, \$59.00 per dozen; "New Century," \$72.00 per dozen.

Lawn Mowers—A rushing business in lawn mowers is reported this week. The growing weather we are having increases the demand. Prices are steady. We quote as follows: With 8-inch wheel, sizes 12, 14 and 16 inch, \$2.65 each; with 9-inch wheel, size 12, \$3; size 14, \$3.12 1-2; size 16, \$3.25 each; Philadelphia pattern, size 12, \$3.25, size 14, \$3.50; size 16, \$3.75 each; High Wheel, size 12, \$4; 14, \$4.25; 16, \$4.50; 18 \$4.75; 20, \$5.25 each.

Garden Hose—People are realizing to quite an extent that they require garden hose, consequently a very large trade is being done. Discounts continue: Trade 75 per cent.; Western, 65 and 10 per cent.; White, 40 and 10 per cent.; Marcon, 40 and 10 per cent.; cotton, 60 per cent.

Hose Reels—With other lines, these are reported in big demand, with prices as before, 15 to 25 per cent. higher than last year.

Lawn Sprinklers—There is a lively trade being done. Prices as before, \$2.50 to \$18 a dozen.

Ice Cream Freezers—The Summer weather continues to increase the de-

mand, which is greater than before. We quote the following range of prices for the leading brands: One quart, \$1.50 to \$1.60 each; 2 quart, \$1.70 to \$1.80 each; 3 quart, \$1.95 to \$2.25 each; 4 quart, \$2.35 to \$2.60 each; 6 quart, \$2.95 to \$3.25 each; 8 quart, \$3.70 to \$4.10 each; 10 quart, \$4.75 to \$5.50 each; 12 quart, \$5.75 to \$6.50 each; 14 quart, \$6.75 to \$7.50 each.

Agricultural Wrenches—An increased number of sales reported with discount as before, 25 per cent.

Harvest Tools—Trade continues the same, with discount unchanged at 60 per cent.

Spring Hinges—A good demand. Our quotations are: No. 5, \$17.25 per gross; No. 10 \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—There is a good business being done. We quote: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs; the price of the 6, 8 and 10-inch sizes is \$4.25.

Wire Hat and Coat Hooks—No change is reported this week. The price of 3-inch hooks is 75c a gross.

Churns—There is no great demand for churns at present. Discounts 40 and 15 per cent. f. o. b. Montreal and 30 and 30 per cent. f. o. b. factory.

Green Wire Cloth—The weather effect is also felt in the sale of green wire cloth, and a large trade continues. The price is \$1.50 per 100 square feet.

Poultry Netting—Business is very good in this line. Discounts for 2-inch 19-gauge standard extras are 60 and 5; for 2-inch 16-gauge, the discounts are 55 and 5 per cent.

Galvanized Poultry Netting Staples—A lively demand still continues. Prices are: Sizes 5-8, 3-4, 1 1-8, 10-lb. boxes, \$12.50 list; 25 and 50-lb boxes, \$12.25 list; 100-lb boxes, \$12 list. Less 57 1-2 per cent.

Bed Staples—No change is reported. The discount on the Montreal Rolling Mills Company's and the B. Greening Wire Company's lists is 57 1-2 per cent. The discounts on the Dominion Wire Company's list are 25 and 2 1-2 per cent.

Blind Staples—The discount is the same as before, 40 per cent.

Galvanized Coil Spring Wire—Demand is fairly active, with no change in prices. Our quotations are as follows: Nos. 6, 7 and 8, \$3.20; No. 9, \$2.70; No. 10, \$3.30; No. 11, \$3.35; No. 12, \$2.95; No. 13, \$3.10. Carlots 5 cents less. Freight prepaid is less than carlots to extent of 25 cents and in carlots to the extent of 20c.

Galvanized Wire—Trade continues slightly better than for the past few weeks. Prices are as follows: No. 5, \$3.65;

Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11 \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots 12 1-2c extra per 100 lbs will be charged.

Barb Wire—There still continues a good demand for barb wire, with prices the same: We quote: \$2.75 per 100 lbs. f. o. b. Montreal, and \$2.50 f. o. b. Cleveland. Carlots of 15 tons \$2.40 f. o. b. Cleveland.

Smooth Steel Wire—A fairly lively trade is being done. We quote: Bright and annealed, \$2.50 per 100 lb. f.o.b. Montreal, Toronto, Halifax, London, Hamilton and St. John. Net extras per 100 lb are now as follows: Coppered wire, 60c; tinned wire, \$2; oiling, 10c; spring wire, \$1.25; best steel wire, 75c; bright soft-drawn, 15c; hay-baling wire, 20 to 25c.

Annealed Hay Wire—No new feature in the market. Annealed hay wire and annealed and oiled wire have not changed in price. Same list with usual discounts.

Fine Steel Wire—The demand is not very large. Discounts 25 per cent., with net extras as follows: 1 and 2-lb. hanks, 25c per 100-lbs.; 1-2-lb. hanks, 37 1-2c; 1-4-lb. hanks, 50c.

Brass Wire—There is a quiet market. Discount as before, 60 per cent.

Copper Wire—Few orders are reported this week. Discount is 60 per cent.

Rivets and Burrs—The demand continues fairly active, with a steady market. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Tinned Roofing Caps—Business in this line continues active. Price is 6c a pound.

Screws—The shortage still continues, but to a less extent than formerly. There is a lively demand. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—A continued active demand is reported. We quote discounts as follows: Carriage bolts common, (\$1) list 3-16 and 1-4 diameter, 60 per cent.; carriage bolts, common (\$1) list, 5-16 and 3-8 diameter, 55 and 5 per cent.; carriage bolts, common (\$1) list, 7-16 diameter and up, 55 per cent.; carriage bolts, full square (\$2.40) list, 60

per cent.; carriage bolts, Norway iron (\$3) list, 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 per cent.; coach screws, cone point, 70 per cent.; nuts, square, all sizes 4c per lb off; nuts, hexagon, all sizes, 41-4c per lb off.

Washers, 45 per cent. off.

Cut Nails—The market is steady and no great change from last week is reported. Prices as before, \$2.30 per keg, f. o. b. Montreal, Hamilton, Toronto and St. John.

Wire Nails—The demand continues good. The manufacturers have almost caught up with the orders, so that the shortage is hardly apparent. We quote the following prices: \$2.40 per keg carlots and \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Boxwood Rules—Discounts continue the same, ranging from 52 1-2 to 50 per cent. off list.

Shot Guns—Trade has picked up to quite an extent. There is a reported shortage in some numbers of single barreled.

Cordage—A steady market and a fair demand. We quote as follows: Pure manila, 15c; British pure manila, 12 1-2c; sisal, 12c; double lath yarn, 11c; single lath yarn, 10 1-2c; Russian tarred spun yarn, 13 1-2c; jute rope, 3-8-in in diameter and upwards, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply. Cotton bedcord, 90c to \$1.70, according to length. Sash cord 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Building Paper—Building operations have created considerable demand in all lines. We quote as follows: Tarred felt, \$1.85 per 100 lbs; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Firebricks—English are selling at \$16 to \$22 per 1,000; Scotch, \$17 to \$22.

Cement—A large amount is required at present for building operations. Prices are steady at former quotations, which were: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex-cars.

PLUMBING GOODS.

Trade continues exceptionally active; the supply houses having all that they can handle since the boats commenced to run. Prices throughout are unchanged, except in iron pipe fittings, the discounts for nipples 1-2 inch to 6 inch being now 70 per cent. The local strike among the journeymen plumbers has not had much effect on the jobbing trade,

the supply men reporting good orders from the city trade.

Lead Pipe—There is an active trade this week at unchanged prices. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent., f. o. b., Montreal, Toronto, St. John, N.B., and Halifax; f. o. b. London, 15c per 100 lbs. extra; f. o. b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—Business brisk. Prices steady and unchanged. We quote: Light soil pipe, 3 to 6 in. 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6-in. 60 per cent.; extra heavy soil pipe, 8-in, 45 per cent. Light fittings, 2 to 6-in, 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6-in, 60 and 5 per cent.; extra heavy fittings 8-in, 45 per cent.

Iron Pipe and Fittings—The only change this week is an increase in the discounts on the larger size of supplies. Business is fairly active. We quote: Standard pipe, per 100 feet, in length under 19 feet—black, 1-8-in, \$2.30; 1-4-in, \$2.30; 3-8-in, \$2.55; 1-2-in, \$2.85; 3-4-in, \$3.65; 1-in, \$5.20; 1 1-4-in, \$7.35; 1 1-2-in, \$8.95; 2-in, \$12.55. Galvanized—1-4-in, \$3.20; 3-8-in, \$3.45; 1-2-in, \$3.90; 3-4-in, \$5; 1-in, \$7.20; 1 1-4-in, \$10.05; 1 1-2-in, \$12.20; 2-in, \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends, are quoted per 100 feet as follows: Black, 1-2-in, \$4.20; 3-4-in, \$5.25; 1-in, \$7.55; 1 1-4-in, \$10.55; 1 1-2-in, \$12.75; 2-in, \$17.60. Galvanized—1-2-in, \$5.25; 3-4-in, \$6.65; 1-in, \$9.55; 1 1-4-in, \$13.25; 1 1-2-in, \$16; 2-in, \$21.90. The discount on all sizes of extra heavy pipe is 12-12 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount and 1-2 in. to 6 in. 70 per cent. discount.

Solder—We quote 18c for bar and 18 1-2c for wire solder.

METALS.

The metal market is in a healthy condition, and in most items there is a firm undertone. Import business in Canada plates, black sheets, tinplates, etc., shows some improvement, better orders being booked this week and some deliveries now being in sight. The iron and steel market is steady. Interest still centres in the harbor sheds contract awarded last week to Peter Lyall & Sons. The contract for the structural material to be used has not yet been placed by this firm. Canadian pig iron sales are increasing in volume, but apparently buying is still being restricted to present requirements. The rate of consumption shows some increases, as compared with last year. Copper and tin are unchanged in price. Copper is still very firm, and tin is steadier with an upward tendency. Sheet zinc is very scarce at present and local prices have been advanced slightly.

Pig Iron—As noted above, sales of Canadian iron show some increase, and imported brands seem to be holding their own. Buying is, however, restricted to present requirements, few consumers being disposed to place large orders for future delivery. The rate of consumption, however, shows some increase. The market is steady and quotations throughout remain as last week. We quote:

"Disc," No. 1.....	\$17.50 delivered Montreal.
"Dom.," No. 1.....	13 50 " " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18 00 delivered Montreal.
" No. 2.....	17 50 " " "
" No. 3.....	16 50 " " "
" No. 4.....	16 00 " " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18 50 " " "
Glenarnock.....	20.25 to 20.75 " " "
Gartsherrie.....	20.00 " " "
Carnbroe.....	18.50 " " "
Carron No. 1.....	19.00 " " "
" (special).....	17.50 " " "
Ayresome No. 1.....	17.50 " " "
" No. 3.....	16.90 " " "
Clarence No. 1.....	16.25 " " "
" No. 3.....	16.00 " " "

Bar Iron—Prices are steady at former quotations. Supplies are not very large. We quote; Merchants' bar, \$1.75; horse shoe iron, \$2; forged iron, \$1.95.

Black Sheets—Firmly held in sympathy with strong primary market. We quote: 28-gauge, \$2.35; 26-gauge, \$2.30; 22 to 24-gauge, \$2.25; 19 to 20-gauge, \$2.20; 8 to 10-gauge, \$2.35.

Steel—Interest centres in the contract for structural material for the new steel sheds to be erected on the harbor front. Local business in steel has been up to expectations. Customers are calling now for prompt shipment. We quote: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.55; machinery (iron finish), \$2.45; square harrow, \$2.45.

Tool Steel—Some business is reported this week. We quote: Black Diamond, 8 to 9c; Sanderson's, 8 to 9c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c.

Sheet Zinc—Supplies are short and in sequence prices are very firm. The best price for cask lots is now \$6.25, and it may be necessary to advance this. Smaller quantities are selling at about \$6.50.

Galvanized Iron—Trade is quite active. Quotations are firmly maintained. We quote: 28-gauge, Queen's Head, \$4.30; Gorbals' "Best Best," \$4.30; Apollo, 10 3-4 oz., \$4.30; Fleur-de-Lis, \$4; Comet, \$4; Bell brand, \$4. In less than case lots 25c extra.

Tinplates—Very firm. Cokes, \$3.75 and charcoals \$4.

Terne Plates—We quote \$6.75.

Canada Plates—Import business shows some improvement. Quotations are: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Ingot Tin—The tin market is steadier this week, and the tendency is now to-

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

BRAND

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Price to Sales Agents

Drummond McCall & Co.

MONTREAL, QUE

or to

Canada Iron Furnace Co.

MIDLAND, ONT

Limited

We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.
and LIVERPOOL, ENGLAND.

wards an advance. Local quotations are now 31 1-2 to 32c.

Ingot Copper—The market shows increasing strength, but former quotations of 14c per lb. for quantities still obtains.

Pig Lead—The market is still easy. Quotations on the local market are still \$3.35 to \$3.45.

Antimony—Cookson's is still quoted at 7 3-4c to 8c.

Coil Chain—Quotations are: No. 6c, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4-in, \$6.10; 5-16-in, \$4.70; 3-8-in, \$4; 7-16-in, \$3.80; 1-2-in, \$3.70; 9-16-in, \$3.55; 5-8-in, \$3.35; 3-4-in, \$3.30; 7-8-in, \$3.25; and 1-in, \$3.20 with 10c allowance on carlots.

Zinc Spelter—Still scarce. Quoted at 6c.

Scrap Metals and Old Materials—Rubbers are cheaper. We quote: Heavy copper and wire, 11 to 11 1-2c per lb; light copper, 10 1-2c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 8 1-2c; light brass, 5 1-2c; lead, 2 3-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10 to \$12; machinery scrap, \$15 to \$16; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs; old rubbers, 5 1-2 to 6c per lb.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,

10 Front Street, East.

Toronto, May 20, 1904.

A STEADY trade in all seasonable lines continues, business being chiefly of a sorting nature. Farmers are busy seeding and retailers are not asking for a great deal of goods for farmers' trade at the moment, but there is much activity in builders' materials and mechanics' tools, also household utensils. Business in small supplies such as bolts, nuts, screws, etc., keep brisk. There is also a good call for fishing tackle, the price of which is practically the same as a week ago. On the whole, the outlook is satisfactory. "The activity of the last few weeks," said one of the shrewdest wholesale dealers this week, "has shown a big improvement on the early weeks of the year, but it has not been sufficient to make the volume of trade for the season as large as last year or as large as we anticipated. Prices are steady throughout.

Washing Machines—The advance in price and the activity continues. The quotations now are: Round, reacting washer, per doz., \$56; square, reacting washer, per doz., \$59; Eclipse, \$48; Downswell, \$36; New Century, \$72.

Oil Stove Wick—Prices are steady since the advance of about 10 per cent. last week.

Steel Track Door Hangers—We quote as follows: Steel track, 1x3-16 inches, \$3.75; 1 1-4x3-16 inches, \$4.75. At least one house is, however, quoting as low as \$3.50 for 1-inch track hangers.

Chain—Business of a sorting nature continues excellent. Prices are still as

follows: 1-4-inch, \$5.60; 5-16 inch, \$4.45; 3-8-inch, \$3.85; 7-16-inch, \$3.70; 1-2-inch \$3.55; 9-16-inch, \$3.45; 5-8-inch, \$3.35; 3-4-inch, \$3.25.

Step Ladders—There is a good demand for pine ladders on this market at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Lawn Mowers—Retailers are well supplied, but evidently trade is good in this line as repeat orders are common. Prices are unchanged, as follows: Woodyatt, 10 1-2 inch wheel, \$8.50; Star, 9 inch, \$7; Daisy, 8 inch, \$5.75; Philadelphia, 7 1-2 inch, \$7; Ontario, 7 1-2 inch, \$15.80; King Edward, 12 inch, \$9.50 (14-inch cut in aboce). D. Maxwell & Sons, 10 1-2 inch, \$7.50 to \$10; 9 inch, \$5.50 to \$6.25; 8 inch, \$4.90 to \$5.50. Discount 50 per cent.

Screen Doors—A good trade is doing in this line. We quote as follows: Common, two or three panel, walnut, 4 inch, \$6.50; yellow and green stained, \$6.75; in natural colors oil finish, \$8.75, with 20c less for 3-inch style.

Screen Wire Cloth—Prices steady at \$1.50 per 100 square feet.

Spring Hinges—An improved trade is reported with prices steady as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Barb Wire—Activity continues. We quote as follows: \$2.75 per 100 lbs. f.o.b. Toronto and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—A sorting trade is doing, prices are firm as follows: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs extra charged.

Coiled Spring Wire—An excellent demand continues. The market is steady. Our quotations are as follows: No. 9, \$2.70 per 100 lbs, freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65, freight allowance to 20c.

Wire Nails—There is a fairly good trade. Prices are firm. Quotations are: \$2.45 per keg f.o.b. Toronto, with carlots \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—There is not much activity. Prices keep steady, however, as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2, and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is less active. Prices are unchanged. We still quote discounts as follows: "C" brand, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—An active demand continues. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Business keeps active in all sizes. Prices are firm. We quote as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—A good trade continues, manufacturers still reporting difficulty in supplying lines. We still quote: Carriage bolts, common (\$1 list), 3-16 and 1-4-inch, 60 per cent.; 5-16 and 3-8-inch, 55 and 5 per cent.; 7-16 and up, 55 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 66 2-3 and 10 per cent.

Cordage—Deliveries of twine continue and some orders are still being taken. The quotations on binder twine for the season of 1904 are as follows: Sisal, 10 1-4c; standard, 10 1-4c; standard Manila (550 ft.), 11 1-4c; Manila (600 ft.), 12 1-4c; pure Manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are unchanged as follows: Pure manila, 15c; British pure manila, 12 1-2c; sisal, 12c; double lath yarn, 11c; single lath yarn, 10 1-2c; double shingle yarn, 11c; single shingle yarn, 10 1-2c; sash cord 'Hereules,' 32 to 35c; 'Star,' 36 to 38c; cotton rope, 3-16-inch and up, 20 1-2 to 22c; 5 32-inch, 25 to 27c; 1-8-inch, 25 to 28c; cotton twine, 3-ply 25 to 28c; 4-ply 32 to 34c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Cement—The market is active this week. Contractors are now calling for cement in large quantities, as the building trade is getting busy. We quote: Canadian Portland, \$1.90 to \$2.25; American Portland, \$2 to \$2.10 f.o.b. Toronto.

Firebrick—Firebricks are in good demand at the following prices: English and Scotch at 28 to 35c.

Building Paper—There is a brisk trade being done in building paper at prices we quote below: Tarred felt, \$1.85 per 100 lbs; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

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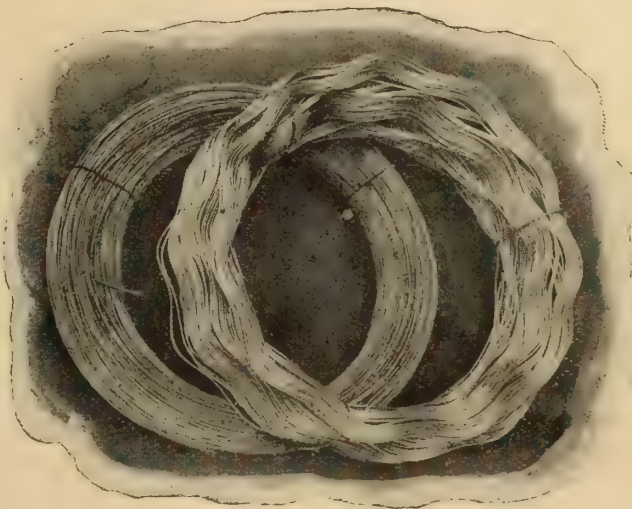
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LONDON, ONTARIO. CLEVELAND, OHIO.

PLUMBING GOODS.

Business continues active in all lines, especially in iron pipe and fittings, enameled ware and brass goods of all kinds. There is considerable cutting in several lines, notably iron pipe and enameled ware. In the latter line several attempts have been made to introduce U. S. goods at "slaughter prices." The great bulk of the trade, however, continues to go to the Canadian manufacturers. No changes in prices are reported.

Lead Pipe—Prices are unchanged. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Prices remain unchanged, while there is a good amount of trade being done. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8-inch pipe 40 and 5 per cent.

Iron Pipe Fittings—A brisk trade is being done, with considerable price-cutting. We quote nominally: Malleable fittings, 20 per cent.; cast iron (standard), 57 1-2 per cent.; headers, 52 1-2 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 per cent.; nipples up to 6-inch inclusive, 67 1-2 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

Iron Pipe—Prices are being cut by dealers, and a considerable amount of business is being done. We quote nominally f. o. b. Toronto: Black pipe, 1-8-inch, \$3.05; 1-4-inch, \$2.07; 3-8-inch, \$2.25; 1-2-inch, \$2.50; 3-4-inch, \$3.22; 1-inch, \$4.58; 1 1-4-inch, \$6.47; 1 1-2-inch, \$7.85; 2-inch, \$11.05; 2 1-2-inch, \$19.25; 3-inch, \$22.75; 3 1-2-inch, \$28.75; 4-inch, \$35.25. Galvanized pipe, 1-4-inch, \$2.88; 3-8-inch, \$3.11; 1-2-inch, \$3.42; 3-4-inch, \$4.40; 1-inch, \$6.35; 1 1-4-inch, \$8.80; 1 1-2-inch, \$10.75; 2-inch, \$14.80.

Enameled Ware—Some disturbance in the market has been created by the offering of U. S. enameled ware on this market at slaughter prices. To meet this competition Canadian makers have reduced prices 50c to \$1 for "B" qualities. There is a good trade doing. We quote: "Standard" 5 1-2 feet rolled rim, first quality, at \$21.60; second quality, \$15.50 to \$16.

METALS.

The metal market continues to manifest a state of depression. The continued reports of a weakening market in the United States have had the effect of causing a general timidity on the part of foundrymen and machinists as to purchasing pig iron and steel products. Buying is, generally speaking, of a hand-to-mouth nature, yet though orders are small they aggregate a large volume. Business in sheet metals has doubtless been affected by the state of the iron and steel market, for there is hesitancy in placing large orders for future delivery. Why this should be so is difficult to determine, as prices in practi-

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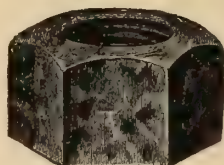
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cally all these lines are normal and are not likely to show any material reduction for some time.

Pig Iron—The market situation is much the same as last week, with possibly an emphasis on the weaker feeling consequent on the weak tone in the United States market. Some English iron is coming forward through Montreal. Some sales of U. S. iron are also reported. The bulk of the business, however, is going to the Hamilton, Midland and Sydney furnaces. Prices remain as follows:

Middlesboro, f.o.b., Toronto.....	\$18 50	to	\$19 00
Hamilton, No. 1 ".....	\$18 50	to	\$19 00
" No. 2 ".....	18 00	to	18 50
Midland, No. 1 ".....	18 50	to	19 00
" No. 2 ".....	18 00	to	18 50
" No. 1 f.o.b. Midland.....	17 00	to	17 50
Radnor, f.o.b. furnaces.....			30 00
Londonderry, f.o.b. furnaces.....	17 50	to	18 00

Bar Iron—Competition for business in this line continues keen. Buying is fairly brisk. We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling,

2 feet and over, 10c per 100 lb; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet by special agreement according to length and size.

Steel—Buying is fairly liberal, but competition for business is so keen that the prices quoted are merely nominal. Quotations are as follows: Morton's high speed, 65c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10 to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Black Sheets—There is a good demand. Prices continue firm.

Canada Plates—A fair demand is reported. A large quantity is being discharged at Montreal for delivery throughout Ontario. Prices are steady. We quote as below: All dull, \$2.50; half-

BUSINESS CONDITIONS IN BRITISH COLUMBIA.

From the Special Correspondent of *HARDWARE AND METAL*

Vancouver B. C., May 13, 1904.

THE Boards of Trade of Victoria, Vancouver, and other cities of the province, have had two very important matters before them for the past week,—the Mexican steamer service and the agitation for the imposition of a duty on lumber. The former matter was so happily settled by the Dominion Government coming to a definite understanding with the representatives from President Diaz's Republic, that it did not perhaps occupy the same relative place in the public interest that it should have. However, there was an immediate response to the notification from Ottawa that there was a move on to establish the line. Business men of all classes said at once, "By all means let us have the line. It will open up a new avenue of reciprocal trade."

* * *

Reference to the duty on lumber is made on the editorial page.

* * *

An interesting arrival from Dawson this morning was Mr. Wilson Foster, who has devoted his energies for the past six years to the development of the quartz and mineral propositions in the Klondike, while every one else was wrapped up in the placer gold claims of the creeks of the Klondike. Mr. Foster has won the cognomen of the Quartz King of the Klondike through his persistent advocacy of the vast possibilities of the working of the enormous deposits of low-grade free-milling ore which are to be found in all the northern districts.

But the chief object of Mr. Foster's present trip, his first visit to civilization in seven years, is to take to the St. Louis Exposition a collection of 20,000 specimens of all kinds of minerals and quartz, including gold, silver, copper, tin, iron and other minerals. He has free-milling quartz specimens worth hundreds of dollars to the ton, and beautiful galena carrying gold and silver and free copper, and placer copper and tin from the creeks of the north, and other interesting samples are included. Mr. Foster has also between 10,000 and 15,000 specimens of gems found in the north, sapphires, black diamonds, rubies, moon stones, etc.

He will exhibit his collection in Vancouver and Victoria, then go east to Winnipeg and Ottawa, showing it in both places and finally proceeding to St. Louis.

His great anxiety is to interest first the people of the Dominion in the possibilities of the quartz mining of the Yukon, after that he will by his exhibit

at St. Louis let the world see what there is in the north besides the placer gold. His exhibit is most certainly a valuable as well as an interesting one, and his store of information on the large deposits of free-milling gold quartz and other minerals is inexhaustible. That he has the confidence of the residents of Dawson is seen from his credentials which include letters from Governor Congdon, Judge Craig, Major Wood of the N. W. M. P., and Registrar Girouard of the Dawson Lands Titles Office.

* * *

A big industry is to be established in New Westminster by a number of local Vancouver parties, who have secured a license for a distillery and have formed a company with large capital to erect a big plant for the manufacture of whisky and other liquors. The distillery is to be erected at Sapperton, the eastern extremity of New Westminster City, and right on the Fraser River, a site of 70 acres having been purchased. Work is to go ahead on the buildings very shortly. W. Braid and R. Kelly, wholesale grocers, are interested, as well as a number of other prominent and well-to-do citizens.

* * *

The development of the pulp industry in this province is apparently to be left to American citizens, a concession having been taken up by Seattle business men on Bella Coola inlet, for which the Government has granted a lease. The new company has purchased from Captain Troup, superintendent of the C. P. R. coast steamship service, a steam launch which is to be sent up at once to prospect the territory on which the lease has been taken. Work on a mill is to begin shortly, so the promoters announce.

Another pulp mill proposition, that of the Oriental Power & Pulp Co., at Swanson Bay on the mainland opposite Princess Royal Island, is also being pushed vigorously. This is the first company to get started in the way of putting up any buildings. A wharf and warehouse have already been built and it is said that the mill is to be gone on with as quickly as possible. A never failing supply of water for generating power is available. It is estimated at a minimum of 15,000 horse power.

* * *

The boring for oil at Steveston, on the Fraser River, twelve miles from Vancouver, is being actively pushed forward by the Richmond Oil Co., which has leases on a large amount of the land surrounding the Town of Steveston. An excellent plant has been installed and derrick erected. The capacity of the plant is sufficient to drive a

twelve inch hole down a thousand feet or more. Last week boring operations began and by the end of the third day the bore-hole was down four hundred feet. It went nearly all the way in quicksand after the top soil was passed through. One or two layers of blue clay were encountered but they did not continue for any distance. It is anticipated that the well will have to be driven at least 1,000 ft. before bedrock is reached. The work will take at least another week. After that the drilling in the rock will, of course, depend entirely on the nature of the formation. From all surface indications, the men in charge of the boring, who are experts from Beaumont, Texas, oil fields, are very sanguine of success.

* * *

Local conditions are somewhat dependent upon the commencement of active northern shipments to enliven trade. The wholesale merchants expect that with the next trips of the Skagway steamers large consignments will go north, for the Yukon River navigation is practically open. It is not likely that there will be any great difference in the Dawson business from last season, but there is a steady trade and regular demand which makes a very nice business for local wholesalers, in hardware as well as in dry goods and groceries and provision lines. The demand for mining tools and supplies is always a steady business.

* * *

Building trades are all extremely active now and there are more blocks and houses going up this season than ever. The development of the farming districts of the Fraser Valley, the lower mainland, the interior and the sections on Vancouver Island open to settlement is very satisfactory this season. Many people from eastern Canada and from the U. S. have been buying up farming lands and fruit lands in the province and settling upon them.

LONDON METAL MARKET.

From The Metal Market Report May 18.

Pig Iron—Scotch warrants, Glasgow, closed at £52, same as last week. Middlesboro No. 3 foundry at £43 6s, a reduction of 17 1-2s in a week.

Tin—Spot tin opened firm at £125 5s, futures at £124 10s, and after sales of 300 tons of spot and 120 tons of futures closed firm at £126 for spot and £125 2s 6d for futures, making price as compared with last week 9s higher on spot and £1 2s 6d higher on futures.

Copper—Spot copper opened steady at £57, futures £57, and after sales of 100 tons of spot and 150 tons of futures, closed quiet at £57 2s 6d for spot and £57 2s 6d for futures, making price as compared with a week ago 7s 6d lower on spot and 8s 9d lower on futures.

Lead—The market closed at £11 16s 3d, making price as compared with a week ago 1s 3d lower.

Spelter—The market closed at £22 2s 6d, making price as compared with last week 2s 6d lower.

PITTSBURG METAL MARKET.

From The Iron Trade Review, May 17, 1904.

WHILE new business in most finished lines continues light, and specifications on existing contracts are by no means heavy, none of the local mills have as yet been compelled to curtail output, although a continuation of the present lull will certainly result in the light running of many mills in the near future. Officials of the United States Steel Corporation for the present at least do not anticipate curtailing their pig iron production, which together with the coke production in the Connellsville region at the present time is at its maximum. Pig iron centres report lower prices and little inclination by consumers to consider purchases for the third quarter. The statistical showing for May 1 was unexpectedly good—an increase in production in April of 106,000 tons from that of March, accompanied by a decrease in stocks of 14,000 tons. On May 1 the production of coke and anthracite iron was at the rate of 19,000,000 tons a year, and all apparently going into consumption, though there is, of course, the undetermined factor of stocks in consumers' hands. Southern iron is freely offered at \$9.50 for No. 2 foundry, Birmingham, and sales on analysis have been at the equivalent of \$9.25. A Southern Ohio purchase of 1,000 tons brought out some low prices both for northern and southern irons. The Bessemer pig iron market is inactive, and the blowing out of two Central Western merchant furnaces this month is arranged for, with the expectation that further curtailment will come early in June. The negotiations for 50,000 tons of Bessemer iron for the Lake Superior Co.'s steel plant at Sault Ste. Marie, Ont., are practically completed, but none of the iron will come from Lower Lake furnaces. The company is also reported in the market for a large tonnage of coke.

Pig Iron—Owing to the few transactions the quotations on nearly all grades are practically nominal. On No. 2 foundry the outside price is \$13.35, while Valley furnaces would no doubt do \$12.25 at the furnace on a desirable tonnage. There is no demand for Bessemer iron and quotations are nominally \$13.35, Pittsburg. This price could also be shaded materially on a desirable order. Southern No. 2 is being offered here at \$9.50 Birmingham or \$13.85 delivered, but no sales are reported. On

Northern forge \$12.75, Pittsburg, can be readily done. According to information at hand at present four active Valley stacks will be on the idle list within the next two weeks and other Valley stacks will follow early in June. On the other hand, there is no indication that the United States Steel Corporation will curtail production in the near future, the blowing out of the Neville Island furnace being offset by the blowing in of furnace No. 3 at Youngstown. We revise quotations as follows:

Bessemer, Valley	\$12 40 to	\$12 50
Bessemer, Pittsburg	13 25 to	13 35
No. 1 Foundry	13 60 to	13 75
No. 2 Foundry	13 25 to	13 35
Grav forge, Pittsburg		12 75
Chilled basic, Valley	12 40 to	12 50
Chilled basic, Pittsburg	13 25 to	13 35

Steel—Agreed quotations continue to be shaded on offers of both open-hearth and Bessemer billets and sheet bars. The large steel producers are, however, maintaining agreed prices, but no large tonnages have been recently offered which would invite any shading on the part of the largest producers. Agreed prices which are being shaded from 50c to \$1 per ton are as follows: Bessemer and open-hearth billets, 4x4 inches and slabs, up to and including 0.25 carbon, \$23 Pittsburg, Wheeling, Valley, Johnstown, Ashland, Ky., Ironton, O. and Lorain, O.; 0.26 and including 0.60 carbon, \$1 advance; and 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 3 7-8 inches and sheets and tin bars are \$1 per ton extra. Bessemer and open-hearth rods are still quoted at \$30 to \$31 Pittsburg.

Structural Material—The reports that the export department of the United States Steel Corporation has received the order for steel for the Montreal wharves is denied. The order has not yet been placed. It calls for about 20,000 tons of material. The general contract for the erection of the sheds on the wharves, as noted last week, has been placed, but the steel work has not yet been sublet. On Thursday the Wabash railroad will open bids for the erection of its elevated tracks on the south side, requiring about 5,000 tons of structural material. The order for the structural work for the thirty-eight warehouses on the Monongahela calling for 12,000 tons, has already been let. Quotations remain unchanged: Beams and channels, 3 to 15 inches, 1.60c; 18 to 24 inches, 1.70c; tees, 1.65c; zees, 1.60c; angles, from 3 to 16 inches, 1.60c; universal mill plates, 1.60c.

Bars—New business is light, while specifications on old contracts are not nearly what is expected at this season of the year. We make the following quotations: Bar iron, 1.35c to 1.40c Pittsburg, for local delivery, while for western shipment quotations are based on 1.25c to 1.30c Pittsburg. Hoops are held at 1.40c base, and bands at 1.35c taking bar extras. Bessemer steel bars

1.35c, net; channels, angles, zees and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 pounds of a size and not less than 1,000 pounds, 10 cents advance; less than 1,000 pounds of a size, 30 cents advance.

Wire and Wire Nails—New business is not nearly as heavy as earlier in the year and when present orders are filled many of the local mills will curtail production to some extent until the middle of the year, when a number will shut down which is done every year. A meeting of the Cut Nail Association will be held on Thursday, but no change in prices is expected. Quotations are unchanged: Wire nails, carload lots to jobbers, f.o.b. cars Pittsburg, are quoted \$1.90 base; plain wire, carload lots, \$1.86 base; barb wire, carload lots, \$2.20 base; staples, carload lots, \$2.05 keg. Galvanized, 30c extra. Carload lots to retailers are held at 5c advance in all lines, and on less than carload lots a further advance of 10c is charged. Steel and iron cut nails, carload lots, \$1.75, and less than carload lots, \$1.80 f.o.b. Pittsburg, plus freight to points of destination. Terms, 60 days, less 2 per cent. off in 10 days.

Merchant Steel—Some business is being closed for delivery after July 1, but on the whole the market is quiet. We make the following quotations: Toe calk, 1.90c; carriage spring steel, 1.75c; tire steel, 1.65c; plow steel, 6 inches and under, 1.40c for Bessemer and 1.45c for open-hearth; plow slabs, 1-4 inch and heavier, 1.65c. The demand for shafting on the part of the machinery manufacturers is not heavy, and tonnage has therefore been considerably affected. Drawn and cold rolled shafting is held at 52 per cent. off in carload lots and 47 off in less than carloads.

Pipes and Tubes—Demand for all kinds of material continues good, especially line pipe.

Coke—The H. C. Frick Co. is not curtailing production. 82 per cent. of its ovens in the upper and lower Connellsville field being in operation at present, and from all indications will continue to operate until July. On the other hand, a number of smaller operators are preparing to shut down owing to the low prices that are ruling and which net them no profit. Furnace coke is held at \$1.45 to \$1.50, and foundry at \$1.90 to \$2. A few grades of foundry coke still command from \$2.25 to \$2.50.

Coal—The coal market in this district is badly demoralized owing to the non-shipment of coal from lower lake docks. Run of mine Pittsburg vein coal has sold during the week at prices ranging from 90c to \$1 a ton, while excellent gas coal in the Connellsville region has been offered at 85 to 90c. These are the lowest prices that have been ruling on coal since the organization of the Pittsburg Coal Co., and it is generally believed that the low prices will only rule temporarily and that they will again advance as soon as the lake shipments commence.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost **must** accompany all advertisements. **In no case** can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

BUSINESS FOR SALE.

FOR SALE—Good harness business—Sales over four thousand last year; population four thousand; nearest opposition seven miles. Apply C. Parsons & Son, 79 Front street east, Toronto. (f)

HARDWARE and tinware business for sale, in one of the best business towns in Ontario; stock about \$1,200; rent low and dwelling in connection; business capable of expansion; good opening for a practical tinsmith and hardwareman. For full particulars address Box 133, **HARDWARE AND METAL**. (22)

HARDWARE BUSINESS—About \$4,000, in largest mining town in New Ontario. For particulars address Horne & Hardy, Copper Cliff. (24)

IMMEDIATELY—Second-hand planer and matcher; iron frame; able to dress 12-in. thick; must be in first-class repair and cheap; give full particulars. Hamilton Bros., Glen Huron, Ont.

AGENCY WANTED.

A YOUNG man experienced in the hardware business wishes to hear of some eastern manufacturer wanting a representative in the hardware line for British Columbia; reference given. Address P. O. Box, 357, Vancouver, B. C. (21)

CANADIAN manufacturers desirous of being well represented in B.C., the Yukon and Alberta and open to exploit the oriental markets are invited to communicate. We know the territory. Have you the goods? **HARDWARE**, Box 367, Vancouver. (21)

SITUATIONS VACANT.

BOILERMAKER—Permanent position on new work for good all-round man; must be sober and steady; state wages and experience. Madden Bros., Simcoe. (f)

CARRIAGE PAINTER—State experience and wages wanted. Apply to the Finnegan Carriage Co., Belleville, Ont. (f)

HARDWARE salesman; steady job; state experience; salary and reference. R. E. Walker, Caledonia, Ont. (21)

PLUMBER WANTED—Apply to Stevenson & Malcolm Co., Guelph, Ont. (f)

TWO good tinsmiths wanted—None but first-class men need apply; wages \$3.50 a day; steady work to competent men. Apply to G. W. Gray, Lethbridge, Alta. (f)

HARDWARE CONDITIONS IN MANITOBA.

Office of **HARDWARE AND METAL**

Room 308 McIntyre Block.

Winnipeg, May 19, 1904.

TRADE throughout the country continues rather quiet, but in the city all round business is reported by the jobbers as being quite satisfactory under the prevailing circumstances. Better prospects in the country are anticipated in the near future.

* * *

The International Harvester Co. have plans out for the erection of a four-storey warehouse, which will be the second largest building to be put up this season. The site decided on for this massive structure will be on the corner of Main and Sutherland streets.

* * *

The market holds the price list the same as was quoted last week.

We quote:

Barbed wire, 100 lb.....	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91
Annealed wires (uncoiled) 100c. less.	
Horsenails, 40 per cent. discount.	
Horseshoes, iron, No. 0 to No 1.....	\$4 75
No. 2 and larger.....	4 45
Snow shoes, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 45
No. 2 and larger.....	4 20

Cut Nails—	Wire Nails—
2d 1 in.....\$4 10	1 in.....4 15
3d Fin. 1½ in.....4 10	1½ in.....4 10
3d 1½ in.....3 75	1½ ".....3 70
4d 1½ in.....3 50	1½ ".....3 50
5d 1½ in.....3 50	1½ ".....3 50
6d 2 in.....3 40	2 ".....3 40
8d 2½ in.....3 25	2½ ".....3 25
10d 3 in.....3 20	3 ".....3 20
20d 4 in.....3 15	3½ ".....3 15
30d 4½ in.....3 10	4 ".....3 10
40d 5 in.....3 10	4½ ".....3 10
50d 5½ in.....3 10	5 ".....3 10
60d 6 in.....3 10	5½ ".....3 10
	6 ".....3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00

Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10
Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10½ oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28.....	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	

Genuine Russian, per lb.....	11
Imitation.....	07 to 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 50

Tinplate, IC charcoal, 20 x 28, box....	9 50
IX.....	11 50
IXX.....	13 50

Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 15
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50

Pig lead, 100 lb.....	5 50
Black iron pipe, ¼ inch.....	3 30
" ¾ ".....	3 30
" 1 ".....	3 40
" 1½ ".....	3 75

Black iron pipe, ¼ inch.....	4 30
" 1 ".....	6 25
" 1½ ".....	8 75
" 1¾ ".....	10 50
" 2 ".....	14 50

Rope, sisal, 7-16 and larger, basis.....	11 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrum.....	11 25

Solder.....	20
Axes, chopping.....	\$ 6 75 to 12 00
" double bits.....	12 00 to 18 00
Bluestone.....	5 25

Screws, flat head, iron, bright.....	.85 and 10 p.c.
Round ".....	80 p.c.
Flat " brass.....	.75 and 10 p.c.
Round ".....	.70 and 10 p.c.
Coach.....	70 p.c.

Bolts, carriage, 3-16 and ¼.....	60 p.c.
" 5-16 and ¾.....	55 and 5 p.c.
" 7-16 and up.....	55 p.c.
Bolts, machine, ¾ and under.....	50 and 5 p.c.
" 7-16 and over.....	55 and 5 p.c.

Bolts, tire.....	60 and 5 p.c.
Bolt ends.....	55 and 5 p.c.
Sleigh shoe bolts.....	70 p.c.
Machine screws.....	70 p.c.
Plough bolts.....	55 and 5 p.c.
Square nuts, case lots.....	3c. discount.
" small lots.....	2½c.

Hex.....	3c.
" case lots.....	3c.
" smaller lots.....	2½c.

Rivets, iron.....	.50 and 10 p.c.
Copper, No. 8.....	32
No. 12.....	36

Coil chain, 3-16 inch.....	9½
" ¼ inch.....	7½
" 5-16 inch.....	5½
" ¾ inch.....	5½
" 7-16 inch.....	4½
" ¾ inch.....	4½
" ¾ and ¾ inch.....	4

Spades and shovels.....	40 and 5 p.c.
Harvest tools.....	60 p.c.

Axe handles, turned, s. g. hickory, doz..	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60

Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.

Building paper:	
Anchor, plain.....	65c.
" tarred.....	70c.
Pure fibre, plain.....	67½c.
" tarred.....	80c.

Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
American R.F.....	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.

Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00

Shot, Ordinary, per 100 lb	6 00
Chilled	6 50
Powder, F.F., keg	4 75
F.F.G.	5 00
Tinware, pressed, retinned.	70 and 10 p.c.
" plain	75 and 2 1/2 p.c.
" pieced	
Japanned ware	37 1/2 p.c.
Enamelled ware, white	45 p.c.
" Famous	50 and 10 p.c.
" Imperial	50 and 10 p.c.
Green Wire Cloth	1 55

PETROLEUM.

Water white American	27 1/2 c.
Prime white American	25 1/2 c.
Water white Canadian	25 1/2 c.
Prime white Canadian	24 1/2 c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap	5
Copper (heavy)	8 1/2 c. per lb.
Yellow brass (heavy)	7 1/2 c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead	2c. to 2 1/2 c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead	\$6 00 to \$6 50
Putty in bladder, 2 1/2 lb., in keg of 100 lbs.	0 02 1/2
Turpentine, pure, in barrels	\$ 0 97
Less than barrel lots	1 02
Linseed oil, raw	0 52
Boiled	0 55

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine	0 29
" " extra engine	0 27
" " dynamo	0 35
" " black	0 22
" " cylinder	\$0 50 to 0 75
(as to quality)	

Harness oil	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00 1/2
" 2nd pressure	1 09 1/2

PERSONAL MENTION.

Mr. Almer Gram, formerly of S. A. Crawford's hardware store, St. Thomas, Ont., has accepted a position at Wright & Son's store, Glencoe, Ont. Mr. Gram has had several years' experience in the hardware business and comes highly recommended.

Mr. H. G. Allen, representing the Oneida Community, Limited, Niagara, has recently returned from a business trip to Manitoba, Northwest Territories and British Columbia. Mr. Allen found business exceedingly good in the Northwest, as well as on the Pacific coast. "Trade is rushing in Winnipeg," he said, "and I found that at Vancouver it was very much better than at the same time last year. In fact, throughout British Columbia trade is better than it was when I was there last year." Speaking of Winnipeg, he said: "It will be the Chicago of Canada. There is no doubt about it. Its growth is simply wondrous."

"New Macassa" Cook



4-Hole Coal or Wood Cook

Steel Oven Bottom

Flat Shaking Grate

RETURNED SEP 26 1904
A GUARANTEE BOND IS SENT FOR each small kitchen and light house-keeping. Will burn coal or wood.

THE D. MOORE COMPANY, HAMILTON

MANITOBA DEPOT

MERRICK, ANDERSON & CO.,

117 Bannatyne St. East, Winnipeg

WRITE US FOR PRICES.

MANUFACTURED BY
G. F. STEPHENS & CO., LIMITED
WINNIPEG, CANADA.

PAINT, OIL AND BRUSH TRADES

"An English Colorman's Impressions."

THE interview under the heading "An English Colorman's Impressions," which appeared in the last issue of Hardware and Metal, has created no little interest, and some comments by a Canadian colorman are in order. Mr. Storer mentions that on his arrival in Bombay he was greeted with bouquets, and a fine wreath of flowers was placed around his neck. Mr. Storer is a Scotchman. Did the band play Annie Laurie? Mr. Storer says this reception was somewhat different from what a traveler might expect in a country like Canada. Yes, in Canada colormen are sometimes received with a "frost," which is so severe as to congeal the air all round and almost bring on a snow storm. One hardware traveler used to be bombarded in a town between Stratford and Goderich with so many stale chestnuts that he was obliged to cut the town out from his route.

The interview emphasizes the importance of brands, mentioning the bird "Liver" with a leaf in its mouth—this bird being now as extinct as the dodo. At least one cynic thought that Liver-pool took its name not from the liver, but from the fact that a great many cattle were killed there. From this, he thought, came the use of the word depicting that part of the anatomy usually associated with biliousness.

To come back to the question of brands. In India, the elephant is the sacred animal and red the sacred color, and whenever a native on the Seringapatam and Chillingawallabadoree Railway sees a keg of genuine "Elephant" red lead he immediately prostrates himself, exclaiming, "Allah is Great; Praise be to Allah." It is thought that when the "Sun" varnish permeates the district populated by the Parsees they will reverence the brand immediately.

Sometimes, however, a brand is a drawback. For instance, last Winter

the "Lion" brand of canned meats was sent up to a lumber camp in British Columbia. The natives positively refused to have anything to do with it. Never having been to the zoological gardens or Forepaugh's menagerie Rain-in-the-Face and his fellow braves evidently took the picture of the lion for a canine, and exclaimed, "Me no siwash (coast) Indian. Me no eat dog." Half the shipment of canned meat, therefore, had to be thrown out.

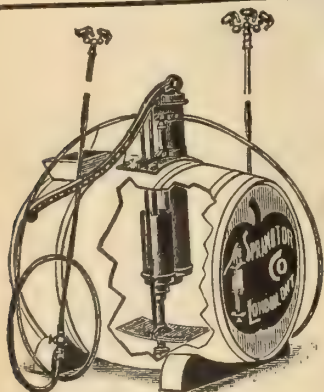
Strike Over in Montreal.

The strike of the painters and decorators of Montreal was declared "off" early in the week, and the men are now back at work. The strike at no time completely tied up business in Montreal, but it was, of course, an inconvenience, and it embarrassed the retail trade to some extent. Paint dealers are not sorry it is over.

Memorial Windows

UNEXCELLED
DOMESTIC ART GLASS

H. E. St. George, London, Ont.



THE SPRAMOTOR

is recognized by the users as the most durable and efficient apparatus yet invented, for the

Prevention of blight and bugs on fruit and potatoes.

For the destruction of wild mustard in the grain crops without injury to the grain, and for

The painting of buildings.

Has been awarded First Place by the Canadian Government in actual contest, and

The Gold Medal at the Pan-American.

The Trade fully protected.

Write for particulars and discounts. Terms liberal.

THE SPRAMOTOR CO.,

68-70 King St., LONDON, CAN.



REKA OCHRE



Ground in Refined Linseed Oil. . .

For fineness of texture and strength of tinting qualities, it is in a class by itself.

A rich chromy shade for less price than ordinary yellow ochre will cost you.

It is one of our rapid sellers and will be the same with you. Mailing sample free on application.

MANUFACTURED ONLY BY

The Imperial Varnish & Color Co.

LIMITED,

TORONTO, ONTARIO, CANADA.

LINSEED OIL

Raw and Boiled

"GUARANTEED PURE"

MANUFACTURED BY

Canada Linseed Oil Mills,
LIMITED,
MONTREAL.



BARRELS WANTED!!

We are open to buy good, sound, oak
Linseed Oil, Turpentine, Varnish, and
Machine Oil Barrels.

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.



Paint of Quality

Don't recommend a paint to your customers unless you know that the quality of it is lasting and the color right. By selling a paint of proved merit you will secure the confidence of your trade—increase sales.

STERLING PAINTS

for outside or interior work—guaranteed right every way. Are fast colors—do not lose lustre—defy the sun's heat—won't blister.

WRITE FOR PRICE LISTS AND CATALOGUE.

CANADIAN OIL CO'Y, Limited

Head Office: Front and Scott Streets

TORONTO.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, May 21, 1904

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, May 20, 1904.

HEAVERY shipments of lead products, such as dry white lead, dry red lead, litharge and orange mineral, have been coming forward, and many back orders have been cleared up. Before these goods arrived the market was exceedingly bare. No change has been made in quotations for these staples and it is satisfactory to note that stocks will now be ample to meet all requirements. One of the features of the week has been the call for Paris green, chiefly, however, for the shipment of green already booked. Importers and makers have been cautious in stocking up this article, and it is well for the hardware trade not to be too confident of the jobbers having ample stocks when the season is in full swing. Ground white lead is moving fairly well, and all painters' sundries, such as stains, dry colors, fillers, coach colors and varnishes are actively enquired for. Quotations continue remarkably steady and a fair movement in all branches has been recorded. We quote:

Ground White Lead—Best brands, Government standard, \$4.50; No. 1 \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4.25 in casks, and in kegs \$4.50.

Dry White Zinc—Pure dry, in casks, 61-4c; in 100-lb kegs, 63-4c; No. 1, zinc, in casks, 51-4c; in 100-lb kegs, 53-4c.

White Zinc—(ground in oil)—Pure, 25-lb irons, 8c; No. 1, 7c; No. 2, 6c.

Putty—Bulk, in barrels, \$1.50; in 25-lb tins and irons, \$1.80; bladdered putty in barrels, \$1.75.

Orange Mineral—Casks, 7c; 100-lb kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead, in casks, \$4.25; in 100-lb kegs, \$4.50; in less quantities, \$5.50 per 100 lb. No. 1 red lead, casks, \$3; kegs, \$4.25, and smaller quantities, \$5.25.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 84 1-2c to 85c per gallon; 2 to 4 barrels, 83 1-2 to 84c per gallon. Standard gallons of 8.6 pounds. The difference in quotations is due to different terms of payment.

Linseed Oil—Raw, 1 to 4 barrels, 43c; 5 to 9 barrels, 42c; boiled, 1 to 4 barrels, 46c; 5 to 9 barrels, 45c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.85 to \$3.50; pure orange, \$2.75 to \$3.40; No. 1 orange shellac, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in wholesale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb drums, 15c; 25-lb drums, 15 1-4c; 1-lb packages, 16c; 1-2-lb packages, 18c; 1-lb tins, 17c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb drums, 15c per lb; 25 lb drums, 15 1-2c; 1-lb paper boxes, 16c; 1-lb tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

ACTIVITY continues to increase in practically all lines. The movement of prepared paints, varnishes, white lead and sundries continues excellent, while the requests for quick delivery of putty, Paris green, etc., are numerous. Turpentine quotations are conflicting, ranging all the way from 81 to about 82 3-4c net. A decline of 5c throughout is noted in putty, while Paris green is now 1-2c higher. Other lines are unchanged. The linseed oil market, though unchanged, is being carefully watched, as its stability now depends on the English market, which is far from buoyant. We quote:

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb and upwards; 1-2c per lb extra will be charged for 12 1-2-lb packages; genuine dry white lead, in casks, \$4.50.

Red Lead—Genuine in casks of 560 lb, \$4.25; ditto, in kegs of 100 lb, \$4.50; No. 1, in casks of 560 lb, \$3.75 to \$4; ditto, in kegs of 100 lb, \$4.25.

White Zinc—Genuine, French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5-gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon; No. 1, \$2.37 1-2, including price of can.



Send us a post card
and let us tell you
all about them.

ANCHOR and ENGLISH LIQUID PAINTS

occupy a unique position among the different brands upon the Canadian market. They stand alone at the top, unrivalled for covering power, permanency of color, and wearing qualities. The only white lead used in their manufacture is the best the world can produce — **Brandram's B. B. Genuine.**

HENDERSON & POTTS, Limited, Halifax.
HENDERSON & POTTS CO., Limited, Montreal.

R. E. THORNE, 768 Craig St.,
MONTREAL

Wholesale Agent and Importer

**Dry Colors, Ochres, Bronze Powders,
Aluminum Powder, Schlag Metal,
Bronze Liquids and Varnishes.**

Toronto Office—29 Melinda St.

Manufacturers and Handlers of Oils, Paints,
Varnish, Soap, Chemicals, Drysalteries, etc.,
throughout the Dominion, should see**THE OIL AND COLOURMAN'S JOURNAL**

the bristling British weekly paper for these trades.

Subscription, \$2.00 per year from date.
Sample for 10 cents.**SCOTT, GREENWOOD & CO.**

19 LUDGATE HILL LONDON, ENG.

**The Quickest
Selling Metal Polish**is the usual remark of the trade
when you ask them about**SOLARINE**It satisfies or your money back.
Write for sample order.**SOLARINE DEPOT, TORONTO.****McCaskill, Dougall & Co.****Manufacturers**RAILWAY, CARRIAGE AND BOAT **VARNISHES.**

HIGH GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.**ABOUT GLUES**

What kinds do you handle?

Are you and your customers
satisfied? Perhaps we cangive you a better article at a fairer figure. Our SCOTCH GLUES will be found
of exceptional strength, and equal to many glues for which much higher prices
are charged. Let us send samples.**GROVE CHEMICAL CO., LTD.,** Appley Bridge, Lancashire, Eng.

TRADE



MARK

Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLYWhich can be obtained direct from the works
or from the principal Color Dealers in Canada**We Pay the
Extra Freight**Our Toronto orders are being filled
PROMPTLY from Montreal and we are
paying the extra freight charges.

TEMPORARY TORONTO PREMISES AT 23 SCOTT ST.

P. D. DODS & CO., Montreal, Toronto, Vancouver**GRAPHITE PAINT**Air, and the **Extremes of Heat and Cold.** Most desirable for painting **Iron and Wooden Bridges, Freight Sheds
or Cars, Elevators, Tanks, Roofs** (iron or shingle), **Boilers, Steamboats, Barges,** or any metal or wooden surface
where exposure is great, and where an exceedingly durable paint is required. Possesses great covering capacity.

In Paste form, ground in refined Linseed Oil, four shades, bbls., ½ bbls., kegs, 25 lb. tins.

In Liquid form, mixed ready for use, bbls., ½ bbls., gal. cans.

SEND FOR QUOTATIONS**STANDARD PAINT & VARNISH CO., Limited**
WINDSOR, ONTARIO.

THE CANADA PAINT COMPANY LTD

FLOOR PAINTS

To paint your Floors, Verandahs, Steps and Stairs with THE CANADA PAINT COMPANY'S specially-prepared floor paint should be a pleasant pastime. It is ground so smoothly and works so freely that good results are bound to follow. Write for color cards showing shades of

**The Canada Paint
Company's
FLOOR PAINT.**

THE CANADA PAINT COMPANY LTD

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 43c; boiled, 46c; 5 to 9 bbls, raw, 42c; boiled, 45c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points. Another quotation is: Raw, 1 to 4 bbls, 43c; boiled, 46c; 5 to 9 bbls, 42c; boiled, 45c; 10 barrels and over open, ex-Toronto, 2 per cent. off 30 days.

Turpentine—Single bbls, 81 to 83c; 2 to 4 bbls, 80 to 82c; 5 bbls and over, open, Toronto, Hamilton, London, net 30 days. Another quotation is: Single bbls, 84 1-2c; 2 to 4 bbls, 83 1-2c; 5 bbls, and over, open ex-Toronto with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5-gallon packages, 50c and 10-gallon packages 80c will be charged.

Glues—Broken sheet, in 200-lb bbls, 8 to 8 1-2c per lb; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100-lb kegs, \$1.85; bulk in barrels, \$1.45; bulk, less than barrels and up to 100-lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per bbl.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per pound, and 8 1-2 to 9c for single tins.

English Paris Green—Petroleum bbls, 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100-lb drums, 14c; 1-lb packages, 15c; 1-lb tins, 16c; 1-2-lb tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls, 13 3-4c; arsenic kegs, 14c; 50 and 100-lb drums, 14 1-2c; 1-2-lb tins, 18 1-2c.

Window Glass.

MONTREAL.

Window Glass—There is an active trade this week at the following unchanged prices: First break, 50 feet, \$1.70; second break, \$1.80 for 50 feet. First break, 100 feet, \$3.25; second break, \$3.45; third break, \$3.95; fourth break, \$4.20.

TORONTO.

A good movement in all kinds of window, plate and ornamental glass is reported. Prices are nominally unchanged, but cutting is still common. Prices are nominally as follows: Star, first break at \$3.30 per 100 feet and Double Diamond, first break, at \$5.10. Discount, 15 and 20 per cent.

Trade Enquiries

HARDWARE AND METAL will be pleased at any time to open its columns for trade enquiries relating to the hardware, metal, machinery or paint trades. Address enquiries to the Toronto Editor.

Canadian Agent Wanted.

An English firm, manufacturers of a brand of enamel, desire to appoint Canadian agents in Canada. This line should have a good sale in Canada. Further information will be supplied on enquiry to Toronto Editor, Hardware and Metal.

Government Enquiries.

The names of the firms making these enquiries, together with their addresses, may be obtained from the Department of Trade and Commerce, Ottawa, by quoting office under which the enquiry appears and giving number.

FROM HIGH COMMISSIONER FOR CANADA.

61. A firm engaged in the purchase of old iron and steel, etc., have asked to be referred to parties in Canada likely to have supplies of scrap metals for disposal.

62. A Dutch manufacturer of household and toilet soaps desires to get into communication with Canadian importers of these articles.

64. A motor and dynamo manufacturer is looking out for a good firm or properly qualified individual to represent him in Canada.

67. Inquiry is made for Canadian quotations for 30-inch and 36-inch hickory pick shafts; also for hammer handles and ash broom handles.

CURATOR, CANADIAN SEC. IMPERIAL INSTITUTE.

35. The manufacturer of a patented sack filling and weighing machine and sack stand asks to be placed in touch with responsible Canadian firm in a position to introduce and push the goods.

36. A firm of merchants and engineers wishes to appoint suitable Canadian resident representative for the sale of heavy hardware, metals, wire fencing and sundry specialties.

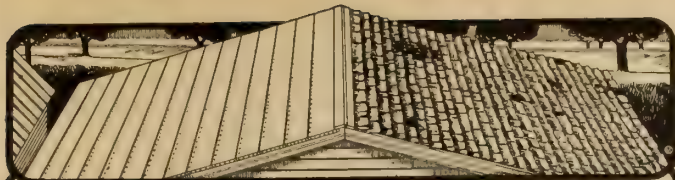
37. A manufacturer of iron water closet flushing cisterns wishes to secure a share of Canadian trade.

38. The manufacturers of wire ropes of various kinds wish to do business in Canada.

40. A correspondent in Northampton would like to secure the agency of a first-class Canadian manufacturer of leather.

AGENT AT LEEDS AND HULL, ENGLAND.

16. Quarry wish to ship grindstones of different sizes to Canada.



CONSTRUCTION vs. DESTRUCTION.
CARE vs. CARELESSNESS.
BEST MATERIAL vs. POOR MATERIAL.
REX FLINTKOTE ROOFING vs. ALL OTHER ROOFING.

REX Flintkote Roofing
TRADE MARK

The above tells the whole story, and means to the dealer a quick-selling, business-bringing roofing vs. the ordinary kind that never sells, because people don't want it, and when they are persuaded to try it never come back again. If you want satisfied customers for roofing, you should write us to-day about REX Flintkote Roofing.

J. A. & W. BIRD & CO., 49 India Street, Boston, Mass.

JACK SCREWS

We are being undersold by American machine-made goods which do not compare with our **Lathe-cut** Threads, Solid Heads and heavy Bell Bottoms.

Our screws will carry 50% heavier loads.

Do not go past us.

THE H. R. IVES CO., MONTREAL

LIMITED.

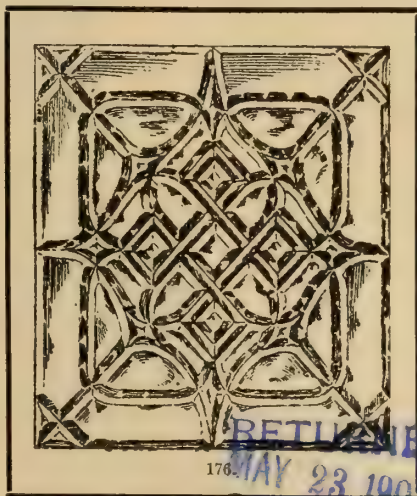
NOT IN THE COMBINE

Ask for Prices of
Shovels, Spades, Scoops, Etc.
WE HAVE A LARGE STOCK.

CANADA HARDWARE CO., Limited, Montreal

Show These
to Your
Customers.

**BEVEL
PLATE
DOOR AND
WINDOW
PANELS**



**LUXFER
WINDOW
PRISMS**

**LUXFER
SIDEWALK
PRISMS**

3 feet Square } STANDARD SIDEWALK PRISMS
4 feet Square } IN STOCK.

LUXFER PRISM CO.,
100 King St. W., TORONTO.



GILLETT'S LYE

—IS GOOD FOR—

**KILLING ROACHES,
VERMIN, Etc.**

Sell Gillett's Lye

—FOR—

KILLING VERMIN.

E. W. GILLETT COMPANY LIMITED
TORONTO

STOVES AND TINWARE.

ADVICE TO STOVE MANUFACTURERS.

PRESIDENT Henry Cribben, of the National Association of Stove Manufacturers, gave some valuable advice to the association in his annual address, delivered on Wednesday, May 11; advice which could be well taken in Canada:

The cost of our production for 1904 will be about the same as that of 1903, less the difference in price of pig iron and steel, which is somewhat lower than last year; but all other fixed charges are the same as heretofore. Therefore, when the difference in the price of pig iron and steel alone is considered, there is very little room for much or any reduction in the selling price of our goods. I would earnestly recommend that you take up this subject of selling prices and give it your earnest and careful consideration, and make such recommendations as you think are necessary under the present conditions, and you will find it will prove to be time well and profitably spent. It is very much easier for the members of this association to reduce their selling prices than it is to advance them; therefore, it becomes our duty to maintain as fair profitable selling prices for the future as well, at least, as we have done during the past five years, through the efforts and co-operation of the local district associations.

Great and lasting benefits may be secured if the district associations will co-operate earnestly with each other, and by their united efforts check the downward trend of selling prices, which if once allowed to start will go below the actual cost of the manufactured product. To prevent this unpleasant condition it is the duty of all members present and absent to use their utmost endeavors to maintain a good market for their product by selling their stoves at such prices as will afford them a fair margin of profit.

During the past few years our product has been changing from cast iron to steel and cast iron combined. Many think the cost formula adopted by the association does not meet the requirements of the present steel and cast iron construction, and believe that a change

is necessary for figuring out the correct cost of the stoves and ranges we manufacture of that class. Our present cost formula has proved very satisfactory in figuring the cost of cast iron stoves and ranges, and if we can secure the correct amount to charge for the manufacturing expenses of the steel portion of the goods we manufacture the matter will be simplified. All that will be required is to make use of the two columns of direct charges, one consisting of the cast iron and the other consisting of steel, adding the correct percentage of manufacturing expense for each class of material, and in the construction of each stove or range so constructed.

W. H. Carrick Bereaved.

The trade will sympathize with W. H. Carrick, vice-president and general manager of the Gurney Foundry Co., Toronto, on the death of his son, Rolph W. Carrick, who died at his father's home, Toronto, on Sunday morning, after an illness extending over several months. The funeral, on Tuesday, though private, was attended by several members of the Gurney Co.'s staff.

Notes of the Trade.

R. G. Hay, tinsmith, Ottawa, is retiring from business.

Froom & Ball, tinsmiths, Winchester Springs, Ont., have dissolved partnership; R. Ball continues the business.

C P. R. LINE TO SUDBURY.

The C. P. R. have completed arrangements for the construction of a line from Toronto to Sudbury, Ont. Location work for the new line has already been completed to French River, and the entire undertaking will be pushed to a completion just as speedily as possible. The statement that a contract has been closed between the Canadian Pacific Railway and Foley Bros. for the construction of the road is understood to be somewhat premature. The Ontario Government has already guaranteed the bonds of the James Bay Railway from Sudbury to Toronto—the project promoted by Mackenzie and Mann—and the news that the C. P. R. is about to enter the field has caused considerable comment.

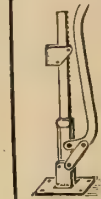
Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.



Wire-Cone Incandescent Toaster

Only perfect Bread Toaster for Gas or Gasoline Stoves. No smoky taste to bread toasted on this toaster. Write for prices.

H. O. Eddy, Montreal. E. T. Wright & Co., Hamilton
HARKINS & WILLIS,
Manufacturers and Inventors - ANN HARBOR, Mich



COVERT MFG. CO.

West Troy, N.Y.

Steel Carriage and Wagon Jacks

Harness Snaps, Chain, Rope and Web Goods, etc.

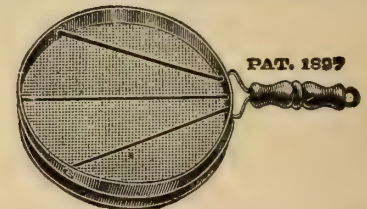
SOLD BY ALL LEADING JOBBERS.



PRIEST'S CLIPPERS

Largest Variety. Toilet, Hand, Electric Power. ARE THE BEST. Highest Quality Grooming and Sheep-Shearing Machines. WE MAKE THEM. SEND FOR CATALOGUE TO American Shearer Mfg. Co., Nashua, N.H., USA

Wiebusch & Hilger, Limited, special New York representatives, 9-15 Murray Street.



The FAIRGRIEVE GAS TOASTER

Retails at 25c. The only Toaster guaranteed to toast on gas, gasoline or blue flame oil stoves without taste or smell. Write for prices.

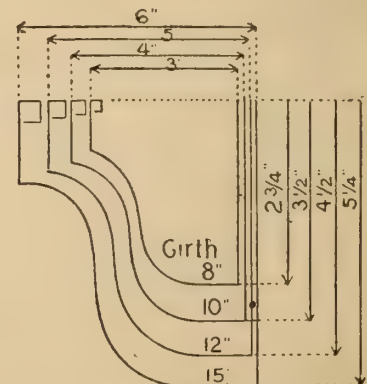
THE FAIRGRIEVE MAN'FG. CO.,
295 COLLEGE ST., TORONTO.

U. S. Branch: 289 Jefferson Ave., DETROIT
Agents for Great Britain: Heine, Solly & Co., Sutton House, 2 Old Street, London, E.C.

O. G. EAVETROUGH

Conductor Pipe, Plain and Corrugated.
Conductor Elbows, Plain and Corrugated.
Hooks, Spikes and Solder.

A FULL SUPPLY OF TINSMITHS' TOOLS.



E. T. Wright & Co., Hamilton, Canada.

May 21, 1904.

STOVES AND TINWARE

Hardware and Metal

Have you
tried it?
Tried what?

SELLING
MANTELS.



This is in your line of business, and it will
pay you.

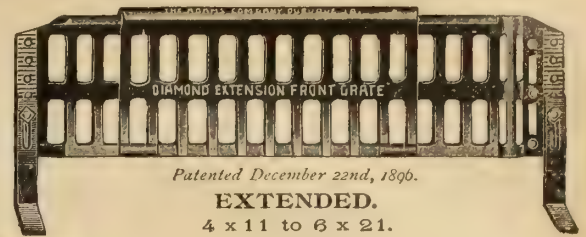
The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

DIAMOND EXTENSION FRONT GRATE.

Ends Slide in Dovetails similar to
Diamond Stove Back.

**Diamond
Adjustable Cook
Stove Damper**

Patented March 14th, 1893.



Patented December 22nd, 1896.

EXTENDED.
4 x 11 to 6 x 21.

For Sale by Jobbers of Hardware.

Manufactured by THE ADAMS COMPANY, Dubuque, Iowa, U.S.A.
" TAYLOR-FORBES CO., Limited, Guelph, Ontario.

P-H

Nipples and Couplings.

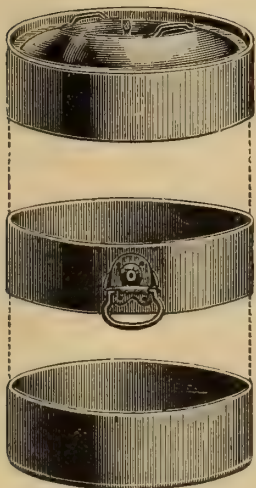


Every Nipple has precisely the same number of threads on each end.
All threads are cut absolutely to Brigg's standard sizes.
All our Nipples are made from P-H Crown Pipe and not from scrap.
Like our Pipe, these Nipples are the best of any made in Canada.

The quality will be remembered long after the price is forgotten.

Page-Hersey Iron & Tube Co., Limited, Guelph, Can.

Davidson's Milk Can Trimmings and Milk Cans with broad hoop patent bottoms



IN COMPLETE
SETS.

"BROAD HOOP" Pattern
—Composed of the following:
1 Broad Hoop Bottom, 1
Cover, 1 Centre Hoop 6 in.
wide, 20 gauge, 1 Broad Top
Hoop, 1 pair Cover Handles,
1 pair Side Handles.

give great satisfaction
and are justly entitled to their
popularity.

Our **BROAD-HOOP BOTTOM** has all the
advantages of a Seamless Bottom without the
strain that spinning entails.

BOTTOMS can be sweated in with very little
solder.

BOTTOMS are concave, draining to the
centre, and are therefore easy to wash out and
will not corrode.

Top bands are shouldered and all bands have
retinned edges.

PATENT FLUSH SIDE HANDLES.

WE CAN SUPPLY BEST QUALITY TINNED IRON
AT LOWEST MARKET PRICES.



Heavy Rolled Edges make our **PATENT BOTTOMS**
doubly durable and waggon and factory floor
protectors.

The THOS. DAVIDSON MFG. CO. Limited. . . . MONTREAL.

HEATING AND PLUMBING

MONTREAL BUILDING PROSPECTS.

IN Montreal the building outlook for the coming season is none too bright. An uneasy feeling amongst builders and contractors seems to be prevalent. This fact is due to the restlessness in labor circles on all sides, rendering the proper tendering of a contract on the part of the builders an uncertain quantity. Were it not for this fact there would, no doubt, be a much larger amount of construction, both large and small, in active operation at the present time.

A representative of Hardware and Metal interviewed several of the architects of the city on the question. Geo. W. Wood, of Hutchinson & Wood, in discussing the situation, said: "There seems to be a lot of work in view, and many buildings planned, but owing to the unsettled condition of the labor market the contractors are holding back. We have just called for tenders on a contract, but there are very few bids, and all high. The fact is, contractors are afraid to take hold of work."

M. W. Hogle, of Taylor, Hogle & Davis, remarked: "Not much can be said regarding building prospects for the year, and one cannot say whether the outlook is good or not. There is some talk of several large undertakings being gone through with, but as yet none of them have assumed definite shape."

These views seem to represent the general feeling regarding the state of affairs in the building line. Many builders and contractors are putting up small buildings and residences on their own account, thus keeping their men busy, rather than risk the loss that would be entailed if a strike found them engaged in a large contract. There are, however, a number of big contracts about to be filled, notably manufacturing work in the outskirts of the city and the new steel freight sheds at the harbor.

The Globe Brass Works.

The Globe Brass Works, of Detroit, Michigan, have announced their intention of specializing, hereafter, on ground key work. They are already extensive

manufacturers of steam, gas and air cocks, also ground key bibbs, but new machinery was recently added and many new and up-to-date patterns were substituted for the old style. A bibb of a new and attractive pattern is being manufactured and a very extensive sale is promised.

President Mellon.

AMONG the Hamilton plumbing fraternity none are held in greater esteem and respect than Stephen Mellon, president of the Master Plumbers' Association, of Hamilton. Mr.



Stephen Mellon, Hamilton.

Mellon is recognized as one of the most careful and thorough workmen in his city, his reputation in this regard having gone a long way to make him a successful plumber in every sense of the term. When not at work Mr. Mellon is an all-round sport. One of his warm personal friends, Wm. Linton, of the Standard Ideal Sanitary Co., insists that he is "the peer of them all" with the gloves and would like to match him for a bout with the president of any branch association in the Dominion, Toronto preferred. He is also an ardent yachtsman, having some hard-fought and well-earned victories to his credit in this sport.

Kingston Plumbers Agree.

The trouble between the Kingston Journeymen Plumbers' Union and the master plumbers of that city has been settled, and the men have returned to work. No further troubles are anticipated in the building trades of Kingston.

National Association Report.

THE published report of the eighth annual convention of Master Plumbers, Gas, Steam and Hot Water Fitters of the Dominion of Canada, is to hand.

The frontispiece is an excellent likeness of Joseph Thibeault, Esq., of Montreal, the president of the association. The body of the report is taken up with the proceedings of the convention, with a list of officers, which was given at the time in Hardware and Metal. The president's address is given in full, as well as are the reports from the different committees and provisional vice-presidents. In this way no district of Canada is neglected, but all parts are brought in active touch with what is being done. The standing committees are: Legislative, apprenticeship, sanitary and essay. The report of the chairman of each of these is embodied in the whole. Photos of the different officers appear throughout the report. An account of the banquet and a group photo of the delegates are also given, while the last dozen pages are devoted to the constitution and by-laws of the association.

Building Permits.

TORONTO.

Mrs. H. Tatten, two dwellings on First avenue, to cost \$3,800.

H. D. Robertson, two dwellings on Avenue road, to cost \$4,400.

W. S. Mitchell, a dwelling on Montrose avenue, to cost \$1,200.

J. A. Newton, a dwelling on Simpson avenue, to cost \$1,800.

C. E. Walton, a dwelling on Smith street, to cost \$1,500.

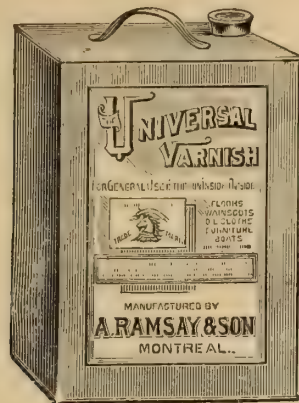
W. J. C. McCrea, a dwelling on Montrose avenue, to cost \$2,000.

Geo. Jackson, a dwelling on Roxborough avenue, to cost \$3,200.

Estates, Limited, a dwelling on Bathurst street, to cost \$5,500.

Controller Shaw, a dwelling on Roxborough street, to cost \$3,500.

Your Varnish Trade



Try a varnish that will sell and keep its reputation, while making customers for you.

Let it be a varnish already established, long tried and proved. Then you make a profit, as good varnishes pay the dealer well.

RAMSAY'S UNIVERSAL

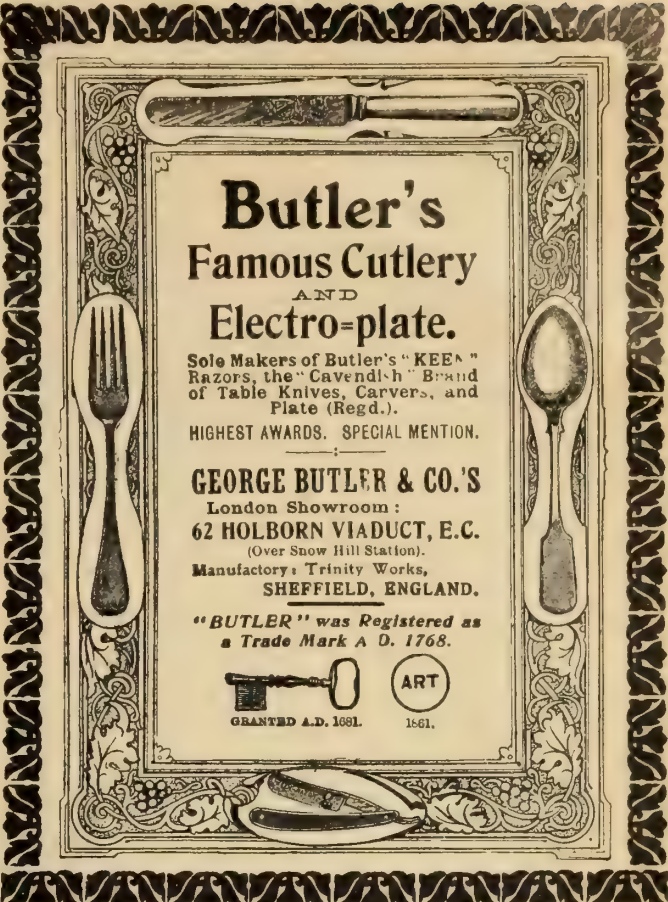
is a seller, returns handsome profits, makes a reputation, satisfies all. It's for boats, counters, desks, doors, carriages, floors, etc.

Ask for our booklet explaining about the rebate that goes with each can to your customer and how we pay it—not you.

A. RAMSAY & SON
MONTREAL

EST'D
1842

VARNISH
MAKERS



Butler's

Famous Cutlery

AND

Electro-plate.

Sole Makers of Butler's "KEE" Razors, the "Cavendish" Brand of Table Knives, Carvers, and Plate (Regd.).


HIGHEST AWARDS. SPECIAL MENTION.

GEORGE BUTLER & CO.'S

London Showroom:
62 HOLBORN VIADUCT, E.C.
(Over Snow Hill Station).

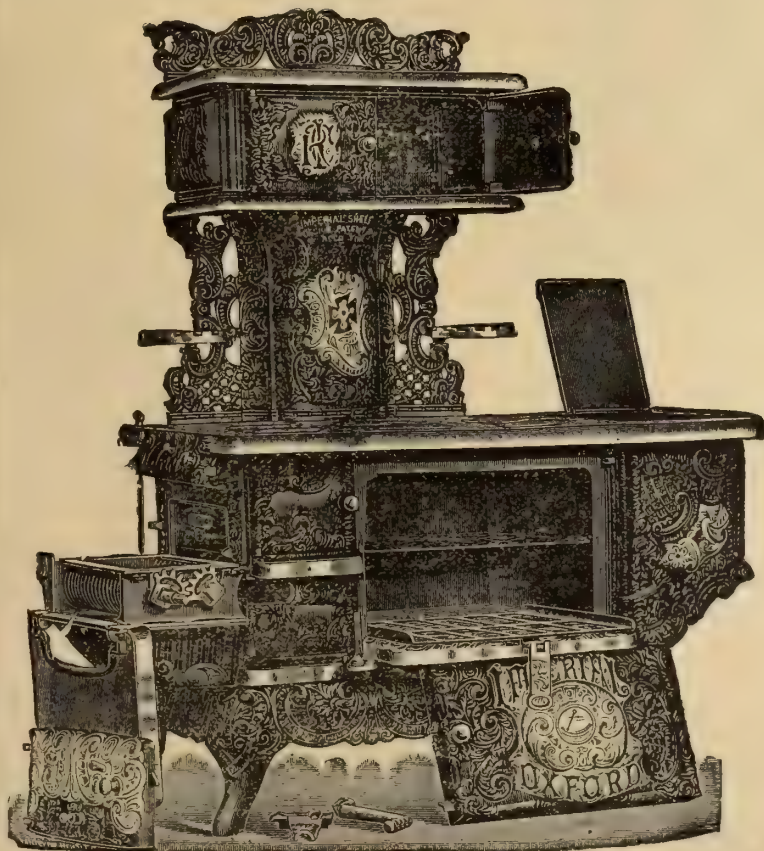
Manufacture: Trinity Works,
SHEFFIELD, ENGLAND.

"BUTLER" was Registered as
a Trade Mark A. D. 1768.



ART

GRANTED A.D. 1881. 1881.



Some ranges are like a cinnamon tree, the bark is worth more than the bush. Handsome exteriors are good—that is why we make the

Imperial Oxford Range

so handsome to look at. But we also make it the best cooker on the market—that is why it sells so well. Would you like the agency for your district?

WRITE US ABOUT IT

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:
THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., LIMITED
CALGARY, ALTA.

J. F. Brown, two dwellings on Powell avenue, Rosedale, to cost \$8,000.

John Slitchter, a residence on First avenue, to cost \$2,400.

Mr. Blair, a residence on Dovercourt road, to cost \$2,700.

Wm. Murray, two dwellings on Spadina road, to cost \$2,700.

L. L. Miller, a dwelling on Symington avenue, to cost \$2,500.

Geo. Tambling, a pair of dwellings on Simpson avenue, to cost \$1,000.

T. H. Cooper and A. W. Stephenson, two dwellings on Huron street, to cost \$5,000.

Brown Bros., Limited, a brick warehouse on Wellington street west, to cost \$40,000.

MONTREAL.

Levi Reid, on 783-7 Berri street, one building, to cost \$3,500.

A. Saveageau, 16 Aylwyn street, one building, to cost \$2,800.

R. A. Ross, on Crescent street, one dwelling, to cost \$10,000.

Louis Juteau, to erect on Huntley street, one dwelling, to cost \$1,000.

P. Archambault, 2 Parker street, one building, to cost \$2,400.

B. Biron, Marquette street, one house, to cost \$3,400.

Emile Vincent, to erect on Aylmer street, one building, to cost \$1,900.

A. Champagne, Christophe Columb street, one dwelling, to cost \$2,000.

Michael Lamil, 1332 St. Andre street, one building, to cost \$2,200.

Mrs. M. E. Labeau, on Cowan street, one building to cost \$2,500.

J. W. Hughes, plumber, corner Craig and St. Antoine, one building, to cost \$10,000.

Grand Trunk Railway Co., in Bonaventure yard, one building, to cost \$6,000.

D. Perrault, to erect on Garnier street, one two-storey building, to cost \$2,000.

S. D. Vallieres, to erect at 1049 St. Denis street, one building, to cost \$2,800.

J. Emile Gamier, alteration on one house at 335 Rachel street, to cost \$3,500.

F. H. Lalonde, of 451 Maisonneuve street, four houses on Aylmer street, to cost \$6,500.

HAMILTON.

James Holden, a \$1,000 frame house, for John Gompf, in Norwood Park.

Wm. Hancock, two houses, to cost \$2,400, on Dundurn street, between Tom and Jones streets, for William Legge.

William Yates & Son, a dwelling for Thomas Wilson, on Wilson street, between Wentworth street and Sanford avenue.

E. B. Patterson, alterations to cost \$1,000 to R. N. Wheeler's store, at the corner of Cannon and Tisdale streets.

John McMahon, two houses, worth about \$1,600 each, on Wilson street, near Ferguson avenue; E. B. Patterson, architect.

OTTAWA.

Nelson Renaud, solid brick dwelling on Cathcart street, to cost \$2,300.

Robert Pull, rough cast house on Eccles street, \$800.

E. G. Laverdure, ten solid brick houses on Sussex street, to cost in all \$15,000.

J. C. Brennan, solid brick warehouse, to be 95 feet, on Queen street, probable cost \$8,000.

LONDON.

John Hayman, three-tenement terrace, on Dundas and Glebe streets.

E. M. Hartford, a brick veneer dwelling, on Tecumseth street.

TORONTO JUNCTION.

W. Irvine, house, Western avenue.

J. Marr, three dwellings, Union street.

O. Bonham, dwelling, Mulock avenue.

T. Wright, dwelling, Clendenan avenue.

A. Peters, house, Gilmour avenue.

R. J. Nichols, residence, Lakeview avenue.

T. J. Lennox, dwelling, Humberside avenue.

Charles Proctor, six dwellings, Union street.

James Bryce, pair dwellings, Mulock avenue.

Plumbing and Heating Notes.

R. W. Phillips, plumber, Guelph, Ont., has been succeeded by F. Smith.

The creditors of the Boston Wood Rim Co., Toronto, were called to meet on Thursday, May 19.

Building Notes.

Brick is scarce in Winnipeg.

A \$25,000 armory is to be erected in Rossland, B.C.

The Avenue Hotel, Dupont street, Vancouver, is to be extended.

Wm. Linton is building a residence for Harding Waters at St. John, N.B.

A new Presbyterian church is to be erected in Cayuga, Ont.

P. R. Brown & Co. are about to erect a block on Fort street, Victoria.

It is proposed to build a consolidated school in Hampton, Que.

P. Gagnon is building a residence on St. Julie street, Quebec, to cost \$5,000.

A frame schoolhouse is to be erected on Kaye street, Halifax, N.S.

A new school is to be built at Fairville, N.B. Its basement is to be of concrete.

Hugh Walker & Son, grocers, Guelph, Ont., are to erect a new \$10,000 warehouse in Guelph.

Tenders are being called for the erection of a Y.M.C.A. building in Paris, Ont.

Work on the Young Liberal Club building, Winnipeg, will be commenced very soon.

A modern brick store and apartment block is to be erected on Garry street, Winnipeg, by J. Badale.

Telford Bros., Winnipeg, are going to erect a new business block on Lombard street.

W. F. Eaton and Ed. Henry will erect modern residences in Pickering, Ont., this Summer.

Wm. Mose, Mr. Jenkinson and J. T. Cook are erecting residences at Elm Creek, Man.

Everett Peel, Clarence Thompson and C. O. Black intend building residences at Oxford, N.S.

Joseph Wrigley is asking for sealed tenders before May 28 for a 400-foot bridge over the Grand, near Galt, Ont.

A five-storey hotel is to be erected on Pender and Seymour streets, Vancouver. It will cost about \$75,000.

Two two-storey brick blocks are to be erected on Pender street, Vancouver, costing in all about \$35,000.

A new school called the Oak Street School, is to be erected in Brantford, Ont.

A five-storey brick building will be erected on Germain street, St. John, N. B., by Emerson & Fisher.

The Wilson Vinegar Works are building new premises, and J. E. Weston is erecting a new warehouse in Tillsonburg, Ont.

It is proposed to erect on five lots on Pender street, Vancouver, a block of stores and warehouses to cover the entire five lots.

The Allan Steamship Co. has decided to erect a large addition to their office building on corner of St. Peter and Youville streets, Montreal.

The Broadway Methodist Church, Winnipeg, are going to build a new church to cost \$117,000, with a seating capacity of 1,000.

Fire did about \$75,000 loss at Gananoque, Ont., last week. The Skinner Co.'s harness factory was one of the places destroyed.

Some New York capitalists propose to erect in Ottawa a new hotel, to cost \$1,000,000. The plans provide for the accommodation of 500 guests.

The congregation of All Saints' Church, Peterborough, have decided to commence building their new church to cost \$20,000 and to seat 800 people.

The Separate School building in St. Thomas, Ont., is to be remodeled both inside and outside, including the heating and ventilating systems.

P. Dierlamm, Stratford, Ont., has invented a cement building block and has taken out a patent covering it. A plant for the manufacture of the brick is to be installed.

Tenders will be received by a representative of "Constructions, Limited," Toronto, at the Grand Hotel, Galt, Ont., for the erection of thirty houses, to take place in that town this Summer.

The contract for the construction of a subway under the main street in Winnipeg has been let by the C. P. R. to Deeks & Deeks, of that city. The structure will be built of concrete, reinforced with steel, will have five arches and room for eight tracks. It is to be finished by September 1, and is to cost more than \$100,000. The contract for the new hotel is expected to be accepted this week.

A 63-Mile Fence.

ACCORDING to the Kansas City Journal, one of the longest fences in the Northwest is being constructed, running entirely around the Lower Brule Indian Reservation, on the Missouri River, in the central portion of South Dakota. This remarkable fence will be sixty-three miles in length. It is composed of four wires placed on posts set a rod apart, cedar and ash posts alternating. In its construction 250 miles of wire will be used, or 76,000 pounds. To erect the fence required an aggregate of 19,000 posts. In this long fence there will be only three gateways, which will be guarded when the fence is completed.

The fence is being constructed by the Indians themselves under the direction of the agency authorities, the Indians receiving \$2.50 per day for man and team and \$1.25 per day for men. It is understood that next Spring the Government will issue stock cattle to the Indians, to be grazed inside this huge inclosure, the purpose of the Government being to encourage the Indians in stock raising so that they can ultimately support themselves.

To Manufacturers' Agents

Hardware and Metal has inquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of inquirers in our various offices throughout Canada and in Great Britain without charge.

Address

Business Manager
HARDWARE AND METAL
Montreal and Toronto

Jardine Patent Pipe Die.

One man can easily thread a two-inch pipe at one cut. Write for circular.

A. B. JARDINE & CO.

Mfrs. TAPS and DIES.

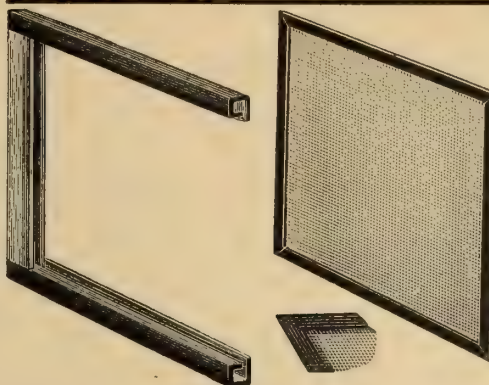
HESPELER, ONT.

PIG IRON

FOR
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Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.



They Cost No More

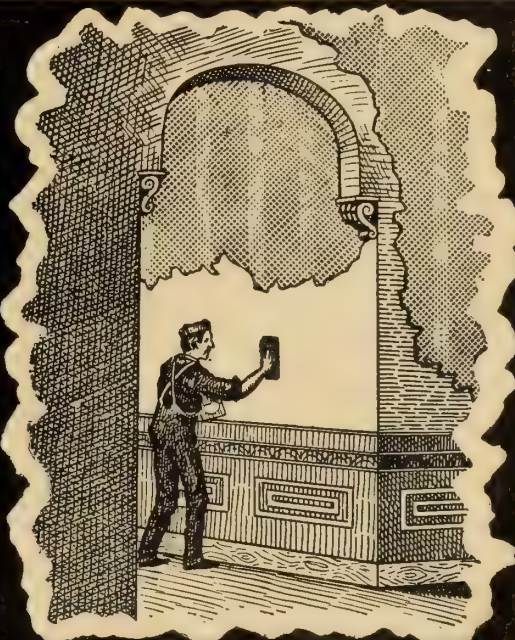
than wood screens. Then why sell wood screens?

Our Metal Screens are vastly ahead of the wood-framed article.

Circular tells about them. Send for it.

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Pedlar's "Perfect" Metal Lath

CHEAP AS WOOD

Delivered to any railway station in Canada, for 10c. per square yard. Discount to dealers. Circulars and samples on request.

Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

ACTIVE operation on the proposed line of railway from Guelph to Goderich will be commenced by the C. P. R. as soon as the right-of-way has been settled. Guelph and Goderich have each voted a bonus to the line, and the municipalities through which it passes have voted large enough bonuses to provide a free right-of-way.

* * *

The Galt Down Draft Furnace Co., Ltd., will apply to the Legislature for incorporation. The necessary capital has already been subscribed by local business men. The object of the company is to manufacture the Witt Down Draft Furnace at present turned out by C. Witt & Co., Norwich, Ont., and also stoves and ranges. A building 60x150 feet will be erected, and it is hoped that the company will be able to commence operations by the end of the Summer or early in the Fall. In the meantime business will be carried on in Norwich as usual.

* * *

The meeting of the organization of the Imperial Coal and Coke Co., Ltd., was held in Montreal on May 11. The following permanent board of directors was appointed: Messrs. W. Herbert Evans, Montreal; J. W. Pyke, Montreal; Randolph MacDonald, Toronto; C. W. Spencer, Frank Thompson, both of Montreal; Andrew Laidlaw and O. G. Laberee, Spokane, Wash. The company has a capital of \$4,000,000, and it is expected that there will be \$1,500,000 in the treasury for the purpose of development. At a meeting of the board of directors W. H. Evans was elected president, J. W. Pyke, vice-president, and Homer Hall, secretary.

* * *

Negotiations are in progress regarding the establishment of a new furniture factory in Stratford. The Webster Manufacturing Co., Superior, Wis., propose through W. H. Crowe and F. A. Nichols to establish a factory to cost \$25,000 and to employ from fifty to one hundred hands on condition that the property be exempt from taxation for

ten years, and the city grant them a bonus of \$1,000 to go towards the purchase of a site and the putting in of a siding.

* * *

St. John, N.B., is to have a new industry. The St. John Sun says that T. H. Barnes and Wm. Brown, both of Hampton, are installing a plant for the manufacture of pails, tubs, etc. There is no factory of this kind in the Maritime Provinces, although there is a steady demand for the products, which are obtained from Ontario principally at the present time. For this reason, there should be good prospects in the Maritime Provinces for such an industry.

* * *

At the regular quarterly meeting of the Almonte Board of Trade, held on May 11, a letter was read from the secretary of the Ottawa Board of Trade regarding a resolution which their board passed, asking that the present duty on soft coal be removed. It was explained that the Dominion Coal beds were too far from Ontario, where a large amount of soft coal was used for manufacturing, to be brought into competition with the American coal, on account of transportation rates; and also if the duty were removed it would in no way interfere with the Dominion Co.'s trade. After considerable discussion a similar resolution was adopted by the Almonte board.

NOTES.

T. G. Blackstock, of Toronto, is in Ottawa to urge that the Government extend the bounty on lead so that it shall apply to the exports of the British Columbia smelters shipped to Germany in the shape of concentrates.

The Papineau Bros.' sawmill, St. George, Man., has been completely destroyed by fire. The loss is \$10,000, not covered by insurance.

A proposition to establish a small brass factory in the town of Wallaceburg is being placed before the business men of that town by the Board of Trade.

A. Klipstein & Co., Ltd., have been granted a license to manufacture and

deal in dyes, chemicals, oils and other goods in Ontario, using a capital not larger than \$40,000.

The Cornwall Beef Co., have been licensed to carry on their business in Ontario of dealers in provisions and packing house products, using a capital not larger than \$25,000.

St. Mary's, Ont., has passed a by-law guaranteeing the bonds for \$100,000 of the Church & Watt Co., and exempting that company from taxes. They are to build a factory in St. Mary's.

The total amount of anthracite coal produced in Pennsylvania during 1903 was 67,000,000 tons, valued at the mines at \$35,000,000, and at the point of distribution at \$300,000,000.

A large section of a proposed block covering five lots on Pender street, Vancouver, is to be occupied as a shoe manufacturing establishment by the British Columbia Manufacturers' Agency.

The Canadian Otis Elevator Co., Hamilton, have decided to erect a branch factory in Winnipeg, and H. B. Douglas, general manager of the company, has been in Winnipeg completing preparations for its construction.

COMPANIES INCORPORATED.

The Kamloops Lumber Co., Toronto, capital \$500,000; purpose, to carry on a general lumbering business.

The Canadian Economic Lubricant Co., Montreal, capital \$50,000; purpose, to do a general oil business.

Canadian Lines, Limited, Toronto, capital \$1,000,000; purpose, to act as ship-owners and passenger and freight carriers.

The Canada Land and Power Co., Montreal, capital \$1,000,000; purpose, to develop lands and generate electricity.

The Imperial Light, Heat and Power Co., Montreal, capital \$3,000,000; purpose, to develop electricity, deal in fuel of all kinds and manufacture steel, iron and other metal goods.

The Elliott Millman Co., Ltd., London, capital \$40,000; purpose, to carry on the business of manufacturers of and jobbers in dry goods and men's furnishings.

The Dominion Business College, Ltd., Toronto, capital \$40,000; to carry on a business college.

The W. J. Bolus Co., Ltd., Toronto, capital \$50,000; to carry on the business of painters, decorators and dealers in wall paper, etc.



Cut of St. Mary's R.C. Church, Calgary, showing metallic towers supplied by the Metal Shingle & Siding Co., Preston.

Do You Know?

That we have an up-to-date Cornice Department in connection with our business; in fact we employ several mechanics who are specialists in cornice work and we are prepared to make anything which can be constructed in the **Sheet Metal Building Line**. Estimates supplied from architects' drawings, prints, or rough sketches.

Give our Cornice Department a trial and see what we can do for you. All work guaranteed.

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Preston, Ont.

Representatives: CLARE & BROCKEST, Winnipeg.
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MAKERS



TO HIS MAJESTY
THE KING.

**The BARTON GILLETTE HORSE
CLIPPING and SHEEP SHEARING CO.,**
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SOMETHING ENTIRELY NEW IN HAND CLIPPERS.

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Fitted with our Patent Ball Race which has enabled us to secure all prizes and medals awarded for Horse Clipping and Sheep Shearing Machinery.

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IN THE
ROYAL STABLES.



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The plates are considerably wider than those supplied with any other Clipper, thus enabling the user to do more work. PATENT ANTI-FRICTIONAL LEVERS and BEST FINISH.

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AWARDED 2 FIRST PRIZES ROYAL SHOW OF ENGLAND BEATING ALL COMERS, AND 12 MEDALS AT VARIOUS AGRICULTURAL SHOWS.

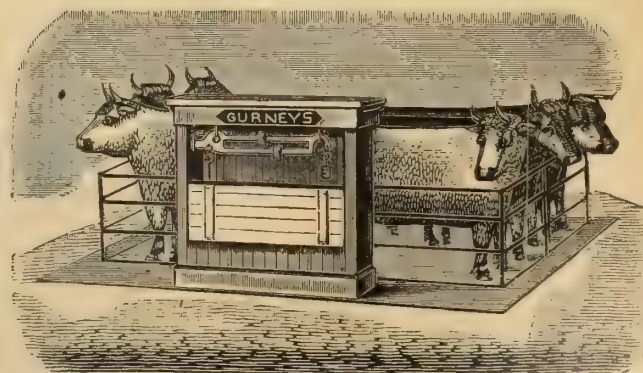
Send for Illustrated Catalogue and Terms. Agents wanted everywhere.

THE BARTON GILLETTE POWER CLIPPERS USED EXCLUSIVELY IN THE STABLES OF:—H.M. THE KING, H.R.H. THE PRINCE OF WALES, H.R.H. THE DUKE OF CONNAUGHT, AND ALL THE LEADING NOBILITY AND GENTRY.

THE GURNEY STANDARD SCALES

Absolutely Accurate and Reliable. The Best of Material and Workmanship. Recognized throughout Canada as

"THE STANDARD"



We make scales of every description. Established 1856.
Send for catalogue and printed matter.

The Gurney Scale Co., Hamilton, Ont.

Eastern Warehouse:

Western Warehouse:

The Gurney-Massey Co., Limited The Gurney Stove and Range Co.
Montreal, Que. Winnipeg, Man. Limited,

FIRE TESTS.

SOME interesting fire tests were carried on this week in Montreal under the supervision of Chief Biescoit of the Fire Department. Several large buildings on St. Sacrament street have recently been equipped with water curtain systems, and these were being tested. Two lines of hose were attached from a neighboring hydrant and the water turned on. Immediately the front of the building under test was enveloped in a curtain of water, although the pressure at the hydrant was only seventy-four pounds. They expect to make further tests soon, placing a fire engine at the hydrant and doubling the pressure. As far as the tests were carried on they were entirely satisfactory, demonstrating the value and usefulness of this system under actual working conditions. If all buildings were thus protected from fire from an outside source there would be no possibility of a fire making a general sweep as did the recent devastating blaze that swept Toronto. These curtains were installed by the H. G. Vogel Co., of 1 and 3 Mercer street, New York, who have a branch engineering department at 30 St. George street, Montreal.

COAL PRICES AT HULL AND TYNE.

JOHN B. JACKSON, commercial agent at Leeds and Hull, Eng., reports:

"Having received several inquiries from Canada as to the price of steam and gas coal in this district, I have gone into the matter very thoroughly with the collieries in my district, and for the benefit of the manufacturers of Canada attach herewith quotations from the collieries in Yorkshire, Durham and Northumberland.

"As will be seen from the below quotations, the price of the different qualities of coal run from about \$1.50 for small, and \$3 for best, the medium price being about \$2.60; this includes free on board at port with the shilling export tax paid. The freight from these ports at present is 5s. or \$1.22 per ton. There are only two drawbacks to a very large trade being done in coal. First: The export duty here of 1s. a ton. Second: The duty in Canada of 10 cents or thereabouts per ton. In the following the tax charges are included in the quotations, and the long ton (2,240 lbs.) is used:

1. Rother Vale—				
Best screened hard steam				
coal—24,000 tons at rate				
of 2,000 tons per month,				
over 12 months.....	11s.	3d.	(\$2.73)	F.O.B., Hull
	11s.	2d.	(\$2.71)	" Grimsby
	10s.	11d.	(\$2.65)	" Goole

Unscreened hard steam				
coal—36,000 tons, 3,000				
tons per month.....	10s.	3d.	(\$2.49)	" Hull
	10s.	2d.	(\$2.47)	" Grimsby
	9s.	11d.	(\$2.41)	" Goole
Rough gas coal—24,000				
tons, 2,000 tons per month.	9s.	0d.	(\$2.19)	" Hull
	8s.	11d.	(\$2.17)	" Grimsby
	8s.	8d.	(\$2.10)	" Goole
Best washed smithy or gas				
nuts—5,000 tons in equal				
monthly quantities, 6				
summer months, April				
to September.....	10s.	3d.	(\$2.49)	" Hull
	10s.	2d.	(\$2.47)	" Grimsby
	9s.	11d.	(\$2.41)	" Goole
2. Denaby & Cadeby—				
Best South Yorkshire—				
Hard steam coal.....	12s.	0d.	(\$2.82)	" Hull
Washed steam coal.....	11s.	0d.	(\$2.67)	" "
" doubles.....	10s.	9d.	(\$2.61)	" "
" singles.....	9s.	9d.	(\$2.37)	" "
" gas coal.....	11s.	0d.	(\$2.67)	" "
3. Thorncliffe—				
Screened coal.....	12s.	4d.	(\$3.00)	F.O.B., Hull
	11s.	10d.	(\$2.88)	" Goole
4. Old Silkstone—				
Large screened gas coal.....	12s.	3d.	(\$2.98)	" Hull
Small.....	11s.	9d.	(\$2.85)	" "
Large unscreened.....	11s.	5d.	(\$2.77)	" "
Small.....	11s.	2d.	(\$2.71)	" "
Screened cannel.....	14s.	2d.	(\$3.44)	" "
Best furnace coke.....	14s.	9d.	(\$3.58)	" "
5. Glass Houghton—				
Large screened silkstone				
coal.....	12s.	2d.	(\$2.98)	" "
Screened silkstone coal.....	11s.	0d.	(\$2.67)	" "
Through and through silk-				
stone coal, containing				
one-third screened.....	7s.	6d.	(\$1.82)	" "
Silkston gas or engine nuts.....	10s.	0d.	(\$2.43)	" "
" pea nut screened.....	9s.	0d.	(\$2.19)	" "

NORTHUMBERLAND.

6. Cowper, West Hartley—				
Screened.....	11s.	10d.	(\$2.89)	F.O.B., Tyne
Unscreened.....	11s.	1d.	(\$2.70)	" "
Small.....	6s.	7d.	(\$1.60)	" "
7. Maud, West Hartley—				
Screened.....	10s.	7d.	(\$2.56)	" "
Unscreened.....	9s.	1d.	(\$2.21)	" "
Small.....	6s.	10d.	(\$1.67)	" "
8. Ravensworth, West Hartley—				
Screened.....	11s.	1d.	(\$2.70)	" "
Unscreened.....	9s.	7d.	(\$2.34)	" "
Small.....	6s.	10d.	(\$1.67)	" "
9. West Hartley Main—				
Screened.....	9s.	10d.	(\$2.38)	" "
Unscreened.....	8s.	8d.	(\$2.11)	" "
Small.....	6s.	0d.	(\$1.46)	" "

DURHAM STEAM COALS.

10. Lambton—				
Screened.....	10s.	10d.	(\$2.64)	F.O.B. Tyne

DURHAM GAS COALS.

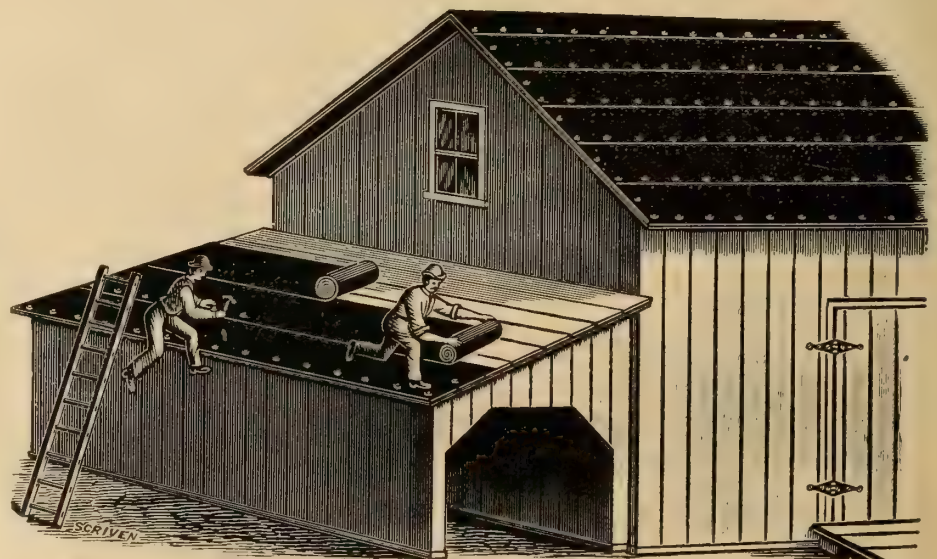
11. New Pelton—				
Screened.....	10s.	1d.	(\$2.46)	F.O.B. Tyne
12. Holmside—				
Screened.....	10s.	1d.	(\$2.46)	" "
13. Bolden.				
Screened.....	9s.	7d.	(\$2.34)	" "
14. Benwell—				
Smithy.....	10s.	10d.	(\$2.64)	" "

"It will be seen plainly from these figures that but for these two duties English coal could be laid down at Montreal at about \$3.25 per ton, perhaps less in large quantities. I am also informed that a great deal of our timber in Canada is brought over in small sailing vessels, which vessels come over in ballast. These vessels pay about 40 cents a ton for their ballast, and I am informed that they would be quite willing to take shipments of four or five hundred tons at a load for from 70 to 90 cents a ton freight. In order to assist the Canadian trade, it is necessary that we should have freight both ways, and I submit that this matter of English coals is of most vital and far-reaching importance to the facilitating and stimulating of trade between the two countries."

BACK WITH THE OLD FIRM.

It will be interesting to the friends of A. H. Symonds, who for so many years represented George Butler & Co., Limited, of Sheffield, in Canada, to know that he is now with this firm in London, England. Shortly after Mr. Symonds's removal from Canada to England, he received an appointment with Messrs. W. & S. Laycock, railway and marine supplies, but after a period of a year or two has now rejoined his old firm.

Nelson, B.C., is to have a new saw mill with a cutting capacity of about 100,000 feet of lumber per day. The mill will cost in the neighborhood of \$250,000, and will employ a large force of men.



USE MICA ROOFING

For Flat or Steep Roofs. It is Waterproof, Fireproof, quickly and very easily laid, and cheaper than other roofing.

HAMILTON MICA ROOFING CO.,

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HAMILTON, CANADA.

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Salt Glazed Vitrified

Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
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Oakey's

The original and only Genuine
Preparation for Cleaning Cut-
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MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and
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For this purpose there can be NOTHING BET-
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Brands.

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HACK SAW BLADES.

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Devoted to Making
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In All sizes
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English Steel.

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Manufacturers of the Celebrated **"Saugeen Brand"**
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Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially
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Cables—
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Emlyn Engineering Works
NEWPORT, MON., ENGLAND

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The Saw That Sells Itself.

When placed in the hands of the intelligent mechanic the **ATKINS** High Grade Silver
Steel Hand Saw sells itself. You simply show it and the saw does the rest.

ATKINS Silver Steel Hand Saws with Perfection Handles are warranted
the **FINEST** Saws on earth in material, temper, grinding and finish.

Write for Catalogue and Prices.

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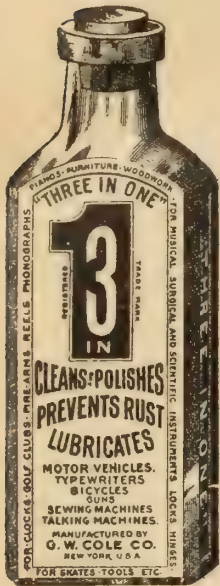
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Oilright for delicate mechanism, guns, bicycles, etc. "3 in 1" is the ideal lubricant for all oiling purposes. Will not gum, thicken, turn rancid or collect dust. Cleans and polishes and positively prevents rust on metal surfaces in any climate or in any kind of weather, better than furniture polish for veneered and varnished surfaces. Sold by all the leading jobbers in Canada.

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is sure to approve the mechanism and system of . . .

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The Hallwood is the best cash register constructed to-day;—that is the first point. It is simpler than any other, has fewer parts, is stronger, is cheaper.

It does all that other registers can do, and something in addition.

There is no good reason why progressive merchants should be without a Hallwood.

SEND FOR DESCRIPTIVE LITERATURE.

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We do Good Printing Cheap

1,000 Business Cards,	\$1.50
1,000 Note Heads,	\$1.00
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1,000 Dodgers,	\$1.25

Write for Samples.

G. A. Weese & Son, 44 Yonge St., Toronto.

ADVERTISE YOUR BUSINESS

Write for particulars about our cuts and ads. from 50 cents up. To advertise in newspapers. Catchy ideas to catch business. Given to one merchant in a town. Send us your ads. and we will criticise them free. WRITE TO-DAY.

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WE WRITE ADS. IN FRENCH.

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Operates as smoothly as the delicate mechanism of a watch, durability unquestioned.

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Agents wanted in all unoccupied territory.

THE OFFICE

DEVOTED TO THE
OFFICE STAFFS OF
BUSINESS
ESTABLISHMENTS

VALUE OF GOOD STATIONERY.

THE stationery which a business house uses in its correspondence will always be one of the first and most important criterions by which the world will judge that firm's standing. First impressions are lasting and in many cases the first impression that a correspondent gets of a firm's business methods is the stationery on which the correspondence is carried on. Cheap printing, or worse yet, poor writing paper without any printing at all, can hardly produce a favorable impression of careful, up-to-date methods. On the other hand, neat and cleanly printed stationery cannot help but give an impression of financial soundness, which evidences of seemingly lower standards in other lines cannot efface.

Many small retail merchants complain of the difficulty they find in procuring credit from large manufacturers. "We always pay our bills promptly, our credit rating is good, but there seems to be something else that is wrong which makes it so hard for us to get credit." This "something" which makes it so difficult for these merchants to get the desired credit is the carelessness shown in the get-up of their correspondence stationery.

In many instances, the appearance of the letters which merchants write to the manufacturers is so slipshod and careless that the credit man rightly takes it for granted that that merchant is not running his business on lines which will enable him to take care of himself in competition with twentieth century methods, and therefore he is doubly watchful before he will take this merchant as an acceptable risk.

Nor is this effect of cheap stationery confined alone to dealings with the large manufacturers, but to the dealings with small customers, in the merchant's own city. If they receive letters and statements written on poor stationery they will have a correspondingly poor opinion of the merchant's methods and they will regulate their dealings with him according to this standard.

If, however, a merchant's stationery is neat, clean and attractive, it will at once produce a favorable impression both on the manufacturer and on the customer. The credit man will find it harder to refuse credit, and the small customer, impressed by the business-like appearance of letters and statements, will pay his bills more promptly and place greater confidence in any statement which a merchant may make in his letter.

Good business-like stationery is not expensive. In fact, it costs but little, if anything, more than cheap printing. Go to a good, reliable printer, and see to it that he gives you good service. An investment here will pay big dividends, but economy in stationery is a penny saved and dollars thrown away.

THE TELEPHONE.

ONE outward expression of the business is the girl who answers the telephone. What would you think if I told you that a prospective customer called you up the other day and that the nasty, harsh-voiced, ill-tempered treatment he received over the wire gave him a most disagreeable impression of your concern.

He got neither the telephone connection, the information, nor the consideration he expected—and you did not get the business. By such a slender thread sometimes hangs an order.

Or would you believe that a certain buyer intended to divide his order between your house and a competitor; that jewel of a girl answered the 'phone; her well-modulated voice, her respectful interest in his behalf, put him in a pleasant and receptive frame of mind.

She said: "Mr. Blank is not in his office at the moment, but I shall send for him at once."

By being at the 'phone in person you got the entire order. Perhaps you recall the incident.

PRICING STOCKS.

THE inability to fix prices properly in one of the most prolific sources of failure in business." This remark was made by the manager of a large department store. In speaking of the various problems that confront the retailer, he said: "A great deal has been written on the subject of advertising, buying, and store management; but writers in trade journals have had very little to say about pricing goods. My experience has taught me that no branch of merchandising is more important or requires more careful study than does the pricing of the stock. Pricing goods is an art which requires much experience and rare judgment.

"In a great many stores it is the custom to fix prices on what is practically a horizontal basis of percentage. The merchant estimates the running expenses of the store at, say 15 per cent, to this he adds his profits which we will also call 15 per cent. This makes a total of 30 per cent which is added to the cost price on every thing in the store. Of course there are a few exceptions, but the merchant may be said to have but one percentage of profit on his entire stock. It saves trouble, perhaps, to mark goods in this way, but it is extremely poor business policy.

"There are many things to be taken into consideration in figuring prices. Competition is, perhaps, the strongest factor; but the nature of the goods and the demand for them are also important. Then, too, the style and popularity of goods give the price-maker an opportunity to display his judgment. For instance, in a lot of suits costing practically the same amount, some will, on account of the style, sell easily for a third more than others. The same is true of dress goods, silks, or in fact, almost any other class of merchandise. There are always some customers who are willing to pay a little more for style and the merchant who does not take advantage of this fact is not alive to his own interests. By marking up the more salable goods he is enabled to reduce the selling price on goods that are less desirable.

"Again, in pricing goods, the merchant will often find it a good advertising policy to mark certain articles down to a very narrow margin of profit. This gives a store the best possible kind of advertising, but it also cuts down the average of profit and every merchant is in

business for profit; so, if some goods are marked down, others must be marked up to maintain the average.

"To sum the matter up, I would say that in making prices the merchant should use his judgment rather than a fixed scale. It is necessary to hold himself as nearly as possible to an average of profit but in different articles he should vary widely from the given percentage."

CAPTAINS OF INDUSTRY OF TO-MORROW.

IN the Atlantic Monthly for March, Mr. Henry A. Stimpson in his article on "The Small Business as a School of Manhood," asks the question: Inasmuch as the small business house is being replaced more and more by the great corporations and the trusts, and inasmuch as the great commercial leaders of to-day were trained in this small business, what effect will come to the business world from the fact that the young men of to-day have not the opportunity of this training?

The problem is this: These few great corporations and trusts need men of remarkable superior ability and talent and wide experience to direct them. A man who has been a clerk all his life has gotten not only into the routine methods of a clerk, but his character has been more or less weakened by a lack of immediate responsibility, so that he is not fit for such a position by the time he reaches his fortieth year. The very methods of the trust have made it impossible for a man to gain such experience and develop his ability in a business of his own. Where, then, are those few great men to be found?

The other day I asked the auditor of a great trust: "What is the method upon which your new business is being organized—to make a machine so perfect that no knave can take advantage of it, or to develop individual character to such an extent that the machinery will be relatively secondary?" He looked at me for a moment, and then, with a curious smile, said: "The latter is what I should be glad to do, but my directors have different ideas. We are trying to make a machine which will be as absolutely perfect as possible." "Then," I said, "you will be beaten, for a man is always cleverer than a machine." "Yes," he said, "I fear so." He has himself since resigned and gone back into private business.

The great corporation is unquestionably the necessity of the hour. It will continue to take on constantly new forms of development. It is already playing and will continue to play a tremendous part in the progress of civilization. But its limitations are none the less real. The evils that are inevitably connected with it must be clearly realized if they are to be offset. Among them all none is so serious as this radical one of the effect upon the character of many of the employees, who, under former conditions, would have been either managing their own business or ambitious for the opportunity of doing so. The life, in a multitude of homes where the salary takes the place of business earnings, is doubtless calmer and steadier, and also in many cases ampler, in that the income is larger. A certain stability is hoped for in a society where anxiety over business conditions is exchanged for the contentment of an assured stipend. And the steadying and quieting of the temper, no longer made irritable by the daily anxiety, is unquestionably a notable social contribution.

FAULTS AT THE START.

MAX FRANKENSTEIN writes: "After six years of observation in several of the largest establishments in New York, I find the great fault with most boys to be their fear of hard work or their bashfulness to do hard work; no matter which of the foregoing is the cause, they are all looking for 9-3 jobs—cinches, in plain words. They are filled with the idea that they know it all, and can, therefore, command large salaries.

"Fortunate indeed is the young man, who, on leaving school, secures a position that nets him \$5 per.

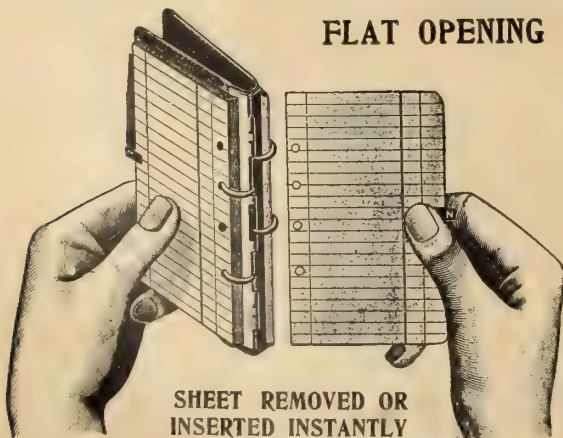
"When we consider a little it is easy to see why large salaries are impossible.

"First, the young man must learn his business (this takes time); then he must learn to work properly (more time required); packing goods while looking out of the window is not attention to the work in hand, and it takes time to work steady without fooling. So until the young man learns his business and learns to work he is a loss to the firm. Hence the small salary.

"Even if you start on a small salary (most of us started that way), don't wear that I-don't-care expression, but put your shoulder to the wheel."

TENGWALL LOOSE LEAF PRICE BOOK

FLAT OPENING



SHEET REMOVED OR
INSERTED INSTANTLY

SEND FOR DESCRIPTIVE PRICE LIST.

HART & RIDDELL, Manufacturers Loose Leaf
Ledgers and all kinds of Binders. TORONTO

Are You Neglecting Your Accounts?

To have good collections you must render your accounts promptly and accurately on the first of every month. With

THE BRIGGS LEDGER SYSTEM

you can do this. Write for our latest illustrated catalogue, free.

The Briggs Ledger System Co.,
Limited

75 York St., - Toronto, Can.

<p>This list is for the purpose of placing retailers, manufacturers' jobbers and other readers in touch with reliable and competent accountants and auditors whose services are so frequently required for such purposes as opening books,</p>		<h2 style="text-align: center;">Leading Canadian Accountants and Auditors</h2>		<p>adjusting and auditing accounts, arranging partnerships or organizing joint stock companies, devising special office systems, making collections and investigations, handling estates, making valuations, etc.</p>	
<p>DAVID HOSKINS, F.C.A. Chartered Accountant, Auditor, Financial Valuator. 207 Manning Chambers, City Hall Sq., Toronto, Canada.</p>		<p>F. H. KIDD, Chartered Accountant, Auditor, Assignee, Etc. 505 McKinnon Bldg., - Toronto.</p>		<p>HENRY BARBER & CO., Accountants and Assignees. Offices: 18 Wellington St. E., - Toronto, Ont.</p>	
<p>Cable Address: "Wigwam." T. G. WILLIAMSON, Chartered Accountant and Auditor, 15 Toronto St., Toronto, Canada.</p>		<p>JENKINS & HARDY, Assignees, Chartered Accountants, Estate and Fire Insurance Agents. 15½ Toronto Street - Toronto. 465 Temple Building, Montreal. 100 William Street, New York.</p>		<p>WILLIAM FAHEY, Accountant and Auditor. 462 McKinnon Building, Toronto.</p>	
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<p>This space \$15 a year.</p>		<p>This space \$15 a year.</p>		<p>This space \$15 a year.</p>	

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Educational Department.

The following institutions for the education of business men's sons and daughters are recommended by this paper:

Do You Want to Learn Shorthand?

EVERYBODY NEEDS IT.

It is an assistance to students, teachers, lawyers, physicians, secretaries, clergymen, editors, reporters, business men,—everybody in fact.

We can teach you at home, the fastest, easiest system known

BY MAIL

Some of our pupils have written 100 words a minute by this system within a month.

Write for information about our Shorthand course.

CANADIAN CORRESPONDENCE COLLEGE, Limited
TORONTO, CANADA.

Western Business College

Cor. College and Spadina avenue, **TORONTO.**

Thorough courses in Bookkeeping, Stenography, Typewriting and Penmanship; individual instruction.

A. J. HOARE, Principal.

St. Margaret's College, Toronto

A Boarding and Day School for Girls.

Thorough courses in every department.

Only teachers of the highest academical and professional standing employed.

GEORGE DICKSON, M.A.,
Director.

MRS. GEORGE DICKSON
Lady Principal.

Typewriting.

Bookkeeping and Shorthand are sure stepping-stones to success.

Teachers who have had practical business experience teach these branches in

THE WILLIS BUSINESS COLLEGE.

A school of genuine merit. Send for our beautiful catalogue.

S. T. Willis, Principal, Cor. Bank and Albert Sts., OTTAWA.

The Belleville Business College,

Limited.

BELLEVILLE, ONTARIO.

Send for handsome catalogue describing fully all courses

J. Frith Jeffers, M.A., Principal

NEW TELEPHONE LINE

A new copper metallic line has just been completed from Simcoe to Port Rowan. The towns listed below can now be reached from Toro to at the following rates:

PORT ROWAN	-	50c.
ST. WILLIAMS	-	50c.
VICTORIA	-	40c.

The Bell Telephone Co. of Canada

Trade With England

Every Canadian who wishes to trade successfully with the Old Country should read

"Commercial Intelligence"

(The address is 168 Fleet St., London, England.)

The cost is only 6c. per week. (Annual subscription, including postage, \$4.80.)

Moreover, regular subscribers are allowed to advertise without charge in the paper. See the rules.

Roofing Felt Factory

Harbor St.,
Montreal.

Paper Manufacturers

Paper Mills,

Joliette,
Quebec.

Building Papers

Ready Roofing

Pitch and Roofing Cement

Black Diamond Brand



TARRED FELT.

Brown and Manilla Wrapping

Hanging and Print,

Colored Papers

ALEX. MCARTHUR & CO., Office 82 McGill St., Montreal

LIMITED.

CURRENT MARKET QUOTATIONS.

May 21, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

Lamb and Flag and Straps—
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

Charcoal Plates—Bright.
M.L.S. equal to Bradley— Per box.
I.C. usual sizes. \$6 50
I.X. " 8 00
I.X.X. " 9 50

Famous, equal to Bradley—
I.C. 6 75
I.X. 8 25
I.X.X. 9 75

Raven and Vulture Grades—
I.C. usual sizes 4 25
I.X. " 5 00
I.X.X. " 5 75
I.X.X.X. " 6 50

"Dominion Crown Best"—Double
Coated, Tissue. Per box.
I.C. 5 50
I.X. 6 50
I.X.X. 7 50
Allaway's Best—Standard Quality.
I.C. 4 50
I.X. 5 50
I.X.X. 6 50

Coke Plates—Bright.
Bessemer Steel—
I.C. usual size, 14x20 3 35
I.C. special sizes, base 3 60
20x28 7 10

Charcoal Plates—Terne
Dean or J. G. Grade—
I.C. 20x28, 112 sheets 7 50
I.X. Terne Tin 10 50

Charcoal Tin Boiler Plates.
Cookley Grade—
X.X. 14x56, 50 sheet hxs. } 7 00
" 14x60, " }
" 14x65, " }

Tinned Sheets.
72x30 up to 24 gauge 7 25 7 50
" 26 7 75 8 00

IRON AND STEEL.
Common bar, per 100 lb. 1 80
Refined 2 20
Horseshoe Iron 2 25
Hoop steel, 1 1/2 to 3-in. base 2 10
Sleigh shoe steel, " 2 10
Tire steel 2 30 2 50
Reeled machinery 3 00
Toe calk steel 2 85 3 00
T. Firth & Co.'s tool steel, per lb 0 12 1/2 0 13
Jessop's high speed steel 0 14 0 15
" standard tool steel 0 14 0 15
" crucible steel 0 14 0 15
" Chas. Leonard's tool 0 08 0 09

Crucible Steel Co.
" Black Diamond 0 10 0 11
" Silver steel 0 13
" Special 0 17
" Rex high speed steel 0 65 0 75
" Self Hardening 0 45 0 50
Sanderson's Crucible Tool 0 04 0 09
" Superior 0 12 0 13
" Extra And 0 15 0 20
" Self Hardening 0 45 0 50
" Rex high speed 0 65 0 75
Jonas & Colver's tool steel 0 10 0 20
" Air Hardening 0 70
Drill steel, per lb 0 08 0 10
Russia Iron—
(genuine) 0 11

RABBIT METAL.

"Tandem," A per lb. 0 27
" B 0 21
" C 0 11 1/2
Frictionless Metal 0 23

Syracuse Smelting Works:
Aluminum, genuine 0 45
Government, " 0 44
Tough, " 0 40
Hard, " 0 40
Dynamo 0 30
Special 0 25
Harmony 0 22
Car Box 0 20
Extra 0 15

The Canada Metal Co.:
Imperial, genuine, 0 40
Metallic 0 30
Hercules 0 20
Star 0 15
No. 1 0 12
No. 2 0 10
No. 3 0 06
No. 4 0 05

Geo. Langwell & Son.
No. 1 0 08
No. 2 0 07
No. 3 0 05 1/2
Extra 0 09 1/2

BLACK SHEETS.

10 and 16 gauge 2 25 2 50
18 gauge 2 30 2 50
20 " 2 30 2 50
22 to 24 gauge 2 35 2 70
26 " 2 40 2 80
28 " 2 40 2 90

Montreal. Toronto
Discount, 50 per cent.

COPPER WIRE.
CANADA PLATES.
Ordinary 2 60
All bright 3 50
Galvanized Canada Plates—
Ordinary 2 60
Dom. Crown 4 35

18x24x52 4 25 4 35
" 60 4 50 4 60
20x28x80 8 50 8 70
" 94 9 00 9 20

GALVANIZED SHEETS. Queen's
Fleur-de-Lis, Gordon Crown, Comet Bell, Head
16 gauge 3 65
18 to 24 gauge 3 75 3 75 3 75 3 75
26 " 4 00 4 00 3 90 4 00
28 " 4 25 4 25 4 05 4 25

American brands, \$4.00 for 28 gauge.
Less than case lots 10 to 15c. extra.

CHAIN.
Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 16 " " " 5 60
" 16 " " " 4 45
" 16 " " " 3 85
" 7-16 " " " 3 70
" 9-16 " " " 3 55
" 9-16 " " " 3 45
" " " " 3 35
" " " " 3 25

Halter, kernel and post chains, 40 to 40 and
5 per cent.

Cow ties 40 p.c.
Tie out chains 65 p.c.
Stall fixtures 35 p.c.
Trace chain 45 p.c.
Jack chain, iron, single and double, discount
35 p.c.
Jack chain, brass, single and double, dis-
count 40 p.c.

COPPER.
Ingot. Per 100 lb.
Casting, car lots 13 75
Bars.
Cut lengths, round, 1/2 to 1 in. 21 00 23 00
" round and square,
1 to 2 inches. 21 00 23 00

Sheet.
Plain, 16 oz., 14x48 and 14x60 20 00
Plain, 14 oz., 21 00
Tinned copper sheet 24 00
Planished 32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 " 0 21
" 50-lb. and above " 0 20

BOILER AND T.K. PITTS.
Plain tinned, per lb 0 28
Spun, per lb. 0 32

BRASS.
Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4 0 23
Tubing, base, per lb. 0 23 1/2

ZINC SPELTER.
Foreign, per 100 lb 6 00 6 25
Domestic " 6 00 6 25

ZINC SHEET.
5-cwt. casks 6 15 6 50
Part casks 6 50 7 00

LEAD.
Imported Pig, per 100 lb. 3 20 3 30
Bar, per lb. 0 05
Sheets, 2 1/2 lb. sq. ft., by roll 0 06 1/2
Sheets, 3 to 6 lb. " 0 06

NOR.—Cut sheets 1/2 c. per lb., extra. Pipe,
by the roll, usual weights per yard, lists at 7c.
per lb. and 35 p.c. lis. f.o.b. Toronto.

NOR.—Cut lengths, net price, waste pipe
8-ft. lengths, lists at 8c.

ANTIMONY.
Cookson's per lb. 7 50 8 00

SHOT.
Common, \$6.50 per 100 lb.; chilled, \$7.00
per 100 lb.; buck, seal and ball, \$7.50. Dis-
count, 17 1/2 p.c. Prices are f.o.b. Toronto,
Hamilton, Montreal, St. John and Halifax.
Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.
BATH TUBS.
Zinc 6 00
Copper, discount 20 per cent. off revised list.

BATHS.
Standard Enameled.
5 1/2-ft. rolled rim, 1st quality 21 60
5 1/2 " 2nd " 17 85

CLOSETS.
Fittings 1 00
Plain Simplex Syphon Jet " 9 00
Emb. " 9 50

Fittings 1 25
Low Down Elgin or Feutonic, plain 6 00
Low " emb. 6 50
Connection 1 25
Plain Richelieu 4 25
Emb. " 4 50

Connections 1 25
Basins, P.O. 14-in. 0 63
Basins, oval, 17 x 14-in. 1 50
Basins, " 19 x 15-in. 2 00

IRON PIPE.
Black pipe—
Per 100 feet.
1 inch 3 05
1 1/2 " 2 07
2 " 2 25
2 1/2 " 2 50
3 " 3 22
3 1/2 " 4 58
4 " 6 47
4 1/2 " 7 85
5 " 11 05
6 " 19 25
8 " 22 75
10 " 35 25
12 " 41 00
14 " 44 00
16 " 57 50

Standard Enameled.
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5 1/2 " 2nd " 17 85

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6 " 19 25
8 " 22 75
10 " 35 25
12 " 41 00
14 " 44 00
16 " 57 50

Standard Enameled.
5 1/2-ft. rolled rim, 1st quality 21 60
5 1/2 " 2nd " 17 85

CLOSETS.
Fittings 1 00
Plain Simplex Syphon Jet " 9 00
Emb. " 9 50

Galvanized pipe—
1 inch 2 88
" 3 11
" 3 42
" 4 40
" 6 35
" 8 80
" 10 75
" 14 80

Malleable Fittings—Discount 20 p.c.
Cast Iron Fittings—
Standard, 5/8 per cent.; unions, 55 per cent.;
on nipples, headers and flanged unions, 60
per cent.

PLUMBERS' BRASS GOODS.
Standard Compression work, dis. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra dis-
count 10 per cent.

Lever handle Stops and Waste, discount 60
per cent. With, in lots of 2 dozen and over
an extra discount of 10 per cent.

J.M.T. Globe, Angle and Check Valves, dis-
count 55 per cent.

Standard Globe, Angle and Check Valves,
discount 60 per cent.

Kerr's special standard globes and angles,
discount 60 per cent.

Kerr's Jenkin disc, copper-alloy disc and
heavy standard valves, discount 60 per cent.

Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator
valves, discount 70 per cent.

Kerr's Jenkin disc, copper-alloy disc radia-
tor valves, discount 70 per cent.

Kerr's quick-opening hot-water radiator
valves, discount 70 and 10 per cent.

Weber's (Kerr) patent straightway gate
valves, brass, discount 55 per cent.

Weber's (Kerr) patent straightway gate
valves, I.B.B.M., discount 70 per cent.

J.M.T. Radiator Valves discount 55 per cent.
Standard Radiator Valves, discount 60 per
cent.

Patent Quick-Opening Valves, discount 65
per cent.

No. 1 compression bath cock net 1 75
No. 4 " " " " " 1 90
No. 7 Fuller's " " " " " 2 10
No. 4 1/2 " " " " " 2 25

Patent Compression Cushion, basin
cock, hot and cold per doz. 15 00
Patent Compression Cushion, bath
cock, No. 2208 2 25

Square head brass cocks, discount 55 per cent.
" iron " " 50 to 60 "

Thompson Smoke-test Machine \$25.00

RANGE BOILERS.
Dominion, 30 gallon net 4 75
" 35 " " " " 5 75
" 40 " " " " " 6 75

Copper, 30 gallon " 22 00
" 35 " " " " " 24 00
" 40 " " " " " 28 00

Discount off copper boilers 15 per cent.

SOLID PIPE AND FITTINGS.
Light soil pipe, discount, 50 per cent.
" fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60
per cent.

7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER. Per lb
Bar, half-and-half, guaranteed 0 19
Bar, half-and-half, commercial 0 18
Refined 0 18

WRENCHES.
Acme, discount 35 to 37 1/2 per cent.
Agricultural, discount 60 per cent.
Coe's Genuine, discount 50 to 25 p.c. cent.

Towers' Engineer each 2 00 7 00
" S. " " per doz. 5 80 6 00
G. & K.'s Pipe " 3 40
Burrell's Pipe each 3 00
Pocket per doz. 0 25 2 90

STEEL STRUCTURAL STEEL

We tender, and most times win out. Mostly a matter of willingness and business.

If any hardware dealer can tell us of a chance to make money, we shall make him a partner in the job—and share profits—we do all the work, too.

THE HAMILTON BRIDGE WORKS CO., LIMITED

Use Long Distance 'Phone, Hamilton 630.

HAMILTON, CANADA.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt. Less than this quantity ½c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	2 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	8 00
umber	7 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs.	7 00
Fire proof mineral	1 50
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl.	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorators' Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs.	4 75	
No. 1, 560 lb. casks, per cwt	4 00	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 50
Pure, kegs	4 75
No. 1, casks	4 25
No. 1, kegs	4 50

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
"British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose	1 85
25-lb. tins	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
"No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
"orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
"black japan	1 10	1 20
"No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granite floor finish, per gal	2 75	
Maple Leaf coach enamels; size 1	\$1.20	
size 2, 70c.; size 3, 40c. each		
Sherwin-Williams' kopal varnish, case, from	1 gal., \$2.50	assorted

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Strip	0 19	0 20
Coopers	0 19	0 20
Huttner	0 12	0 16
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 40 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 5 per cent. to list. B.B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 10 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

per lb.	
Best thick brown or grey felt wads, in ½-lb. bags	80 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

AXES.

Chopping Axes	
Single bit, per doz.	7 00
Double bit, "	10 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters Axes	5 50
Boys' Axes	6 25
Splitting Axes	7 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys' handled	5 75
"hunters"	5 25
Ordinary, per gross	6 00
Best quality	10 00

AXLE GREASE.

Brass, 60 per cent.	6 00	7 00
Nickel, 55 per cent.	10 00	12 00

BELLS.

Hand.

Canadian, discount 45 and 50 per cent.		
Door.		
Gongs, Sargent's	5 50	8 00
" Peterboro', discount 50 and 10 per cent. off new list.		
Farm		

American, each	1 25	3 00
American, per lb.	0 35	0 40

BELLOWS.

Hand, per doz.....	3 35	4 75
Moulders', per doz.....	7 50	10 00
Blacksmiths', discount 40 per cent.		

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	
Agricultural, not wider than 4 in., 75 per cent.	

BITS.

Auger.	
Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	
Car.	
Gilmour's, 47½ per cent.	
Expansive.	
Clark's, 40 per cent.	

Gimlet.

Clark's, per doz	0 65	0 90
Diamond, Shell, per doz	1 00	1 50
Nail and Spike, per gross	2 25	5 20

BLIND AND RED STAPLES.

All sizes, per lb.	0 07½	0 12
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BOLTS AND NUTS.

Per cent.	
Carriage Bolts, common (\$1 list)	
" 3-16 and ½"	60
" 3-16 and ¾"	55 and 5
" 7-16 and up	55
" full sq. (\$2.40 list)	60
Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ½ and less	
Machine Bolts, 7-16 and up	55 and 5
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., 5½ c.	

BOOT CALS.

Small and medium, ball	per M. 4 25
Small heel	4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.

BUTCHERS' CLEAVERS.

German	per doz.	6 00	9 00
American	"	12 00	18 00

BUTCHER KNIVES.

Bailey's	per doz.	0 60	6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 600 " 1 00
"	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Refined Tar	small packages 0 25
Coal Tar	per barrel 5 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 10

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.90 or 2-inch.

BUTTS.

Wrought Brass, net revised list.	
Cast Iron.	
Loose Pin, discount 60 per cent	

Wrought Steel.

Fast Joint, discount 65, 10 and 2½ per cent.	
Loose Pin, discount 65, 10 and 2½ per cent.	
Berlin Bronzed, discount 70, 70 and 5 per cent.	
Gen. B ronzed	per pair 0 40 0 65

CARPET STRETCHERS.

American	per doz.	1 00	1 50
Bullard's	"		6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross	7 50	8 50
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CHALK.

Carpenters' Colored, per gross	0 45	0 75
White lump	per cwt. 0 60	0 65
Red	" 0 05	0 06
Crayon	per gross 0 14	0 18

CHISELS.

Socket, Framing and Firmer.

Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.

Colonial Stock Foods, 10c. packages, per doz	\$4 60
" " " 25c. pkgs., "	2 00
" " " 10c. "	75
" " " 25-lb. pail, each	1 30
Poultry Foods, 25c. packages	1 25
Corn Powders, per doz	1 25
Worm	1 25
International 1 Stock Foods, \$1 packages, per doz.	8 00
International Stock Foods, per lb.	2 75
" " " 10c. per lb.	10 50
" " " \$1 pkgs. per doz.	8 00
" " " 25c. pkgs. per doz.	4 00
" " " 10c. pkgs. per doz.	8 00
" " " 25c. pkgs. per doz.	8 00
" " " 10c. pkgs. per doz.	8 00
" " " 25c. pkgs. per doz.	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.	

CLIPS.

Axle, discount 65 per cent.

Two Paper Mills and Three Factories Busy

making Paterson's Wire-Edged Ready Roofing, Building Papers and Roofing Felts.

Our success is due to the fact that we make the goods the people want, and our customers know their orders will be promptly and carefully filled.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.

Plain or Corrugated.

2-inch	per 100 feet	3 00
3 "	" "	4 00
4 "	" "	5 25
5 "	" "	6 75
6 "	" "	9 00

CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	per pair	0 17½
S. & D., " 5	" "	0 22½
S. & D., " 6	" "	0 15
Boynton pattern	" "	0 20

DOOR SPRINGS.

Torrey's Rod	per doz.	1 75
Coil, 9 to 11 in.	" "	0 95 1 65
English	" "	2 00 4 00

DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Miller's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.

Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAVETROUGHS.

10-inch per 100 ft. | 10 00 |

ELBOWS (stovepipe.)

5 and 6-inch, common per doz. | 1 20 |

7-inch " " | 1 35 |

Polished, 15c. per dozen extra.

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western 70 and 10 per cent. | |

Arcade " " | " " |

Kearney & Foot " " | " " |

Disston's " " | " " |

American " " | " " |

J. Barton Smith " " | " " |

McClellan " " | " " |

Eagle " " | " " |

Nicholson, 60 and 10 to 60, 10 and 5 " " | " " |

Royal " " | " " |

Globe " " | " " |

Black Diamond, 60 and 10 to 60, 10 and 5 per cent.

Jowitt's, English list, 25 to 27½ per cent.

Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1 50

GLASS.

Window.

Size United Inches.	Per 50 ft.	Star Per 100 ft.	D. Diamond Per 50 ft.	Per 100 ft.
Under 26	3 80		5 06	
26 to 40	4 00		5 44	
41 to 50	4 50		6 56	
51 to 60	4 75		7 50	
61 to 70	5 00		8 62	
71 to 80	5 30		9 38	
81 to 85			10 75	
86 to 90			12 30	
91 to 95			15 00	
96 to 100			18 00	

Discount 15 per cent.

GAUGES.

Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33 each | 1 65 2 40 |

GILLETTE'S POWDERED LYE.

1-case, \$3.60; 3-case, \$3.50; 5-case and over, \$3.40.

HALTERS.

Rope, ¾-inch	per gross	12 00
Rope, 1-inch	" "	9 00
Rope, 1 to 1½-inch	" "	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1½ "	" "	5 20
Web	" "	2 45

HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian

discount 25 to 27½ per cent.

Tack.

Magnetic per doz. | 1 10 1 20 |

Sledge.

Canadian per lb. | 0 07½ 0 08½ |

Ball Peen.

English and Canadian, per lb. 0 22 0 25

HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00

tore door per doz. | 1 00 1 50 |

Fork.

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

American per doz. | 1 00 1 25 |

Plane.

American per gross | 3 15 3 75 |

Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

Steel barn door doz. pairs. | 8 00 10 00 |

Stearns, 4-inch " " | 4 50 |

" 5-inch " " | 6 00 |

Zenith " " | 9 00 |

Lane's covered—

No. 11, 5-foot run " " | 8 40 |

No. 11½, 10-foot run " " | 10 80 |

No. 12, 10-foot run " " | 12 60 |

No. 14, 15-foot run " " | 21 00 |

Steel, covered " " | 4 00 11 00 |

track, 1 x 3-16 in (100 ft) " " | 3 75 |

" 1½ x 3-16 in (100 ft) " " | 4 75 |

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½ | |

" " 5-in., " 0 06½ | |

" " 6-in., " 0 06 | |

" " 8-in., " 0 05½ | |

" " 10-in., " 0 05½ | |

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge per 100 lb. | 4 50 |

6 to 10 in. " " | 3 25 |

Spring, No. 20, per gro. pairs " " | 10 50 |

HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter per doz. | 4 00 4 50 |

HOLLOW WARE.

Tinned cast, 35 per cent.

BOOKS.

Cast Iron.

Bird cage per doz. | 0 50 1 10 |

Clothes line, No. 61 " " | 0 00 0 70 |

Harness " " | 0 60 12 00 |

Hat and coat per gro. | 1 10 10 00 |

Chandelier per doz. | 0 50 1 00 |

Wrought Iron.

Wrought hooks and staples Canadian dis- | |

count 60 per cent.

Wire.

Hat and coat, discount 60 per cent.

Belt per 1,000 | 0 60 |

Screw, bright, discount 60 per cent.

HORSE NAILS.

"C" brand, 40, 10 and 7½ per cent. off list { Oval

"M" brand, 55, per cent. { head

Countersunk, 57½ per cent.

"Monarch," 50 and 7½ per cent.

"Peerless" 50 per cent. dis.

HORSESHOES.

F.O.B. Montreal

No. 2 No. 1

and

larger, smaller.

Iron Shoes.

Light, medium and heavy 3 65 3 90 | |

Snow shoes " " | 3 90 4 15 |

Steel Shoes.

XL, sizes 1 to 5 " " | 5 35 |

Light, No. 2 and larger " " | 3 80 |

No. 1 and smaller " " | 4 05 |

Featherweight, all sizes 0 to 4 " " | 5 35 |

Toeweight, all sizes 1 to 4 " " | 6 60 |

JAPANNED WARE.

Discount 50 per cent.

ICE PICKS.

Star per doz. | 00 3 25 |

Brass spun 7½ per cent. discount off new list.

Copper per lb. | 0 30 0 50 |

American, 60 and 10 to 65 and 5 per cent.

KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,

American per gross | 0 60 |

KNOBES.

Door, japanned and N.P., per

doz. 1 50 2 50 | |

Bronze, Berlin per doz. | 2 75 3 25 |

Bronze, Genuine " " | 6 00 9 00 |

Shutter, porcelain, F. & L.

screw per gross | 1 30 00 |

White door knobs per doz. | 00 |

HAY KNIVES.

Net prices.

LAMP WICKS.

Discount, 60 per cent.

LANTERNS.

Cold Blast per doz. | 7 00 |

No. 3, "Wrights" " " | 8 50 |

Ordinary, with O burner. " " | 4 00 |

Dashboard, cold blast. " " | 9 00 |

No. 0 " " | 5 75 |

Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.

Porcelain lined per doz. | 2 20 5 60 |

Galvanized " " | 1 87 3 85 |

King, wood " " | 2 75 2 90 |

King, glass " " | 4 00 4 50 |

All glass " " | 0 50 0 90 |

LINE.

Fish per gross | 1 05 2 50 |

Chalk " " | 1 90 7 40 |

LAWN MOWERS.

Woodyatt, 10½-in. wheel, 14-in. cut .. 8 50 | |

Star, 9-in. " " " | 7 00 |

Daisy, 8-in. " " (net) | 2 87½ |

Philadelphia, 7½-in. " " " | 7 00 |

Ontario, 7½-in. " " " | 15 80 |

King Edward, 12-in. " " " | 9 50 |

Discount, 50 per cent., with freight conces-

sions in quantity shipments.

Maxwell & Sons:

10½-in. high wheel 7 50 10 00 | |

9-in. " 5 50 6 25 | |

8-in. " 4 90 5 50 | |

Discount 50 per cent.

LOCKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwin per doz. | |

Cabinet.

Eagle, discount 30 per cent.

Padlocks

Remington Double Hammer Guns

ARE PREFERRED

Because
they retail
at a
moderate
price.



Because
of their wearing
and shooting
qualities

Because they have the reputation of "Standing the Racket."

REMINGTON ARMS CO., ILION, N.Y.

Agency: 313 Broadway, New York.

Depot: 86-88 First St., San Francisco, Cal.

PLANE IRONS.
English per doz. 2 00 5 00

PLIERS AND NIPPERS.
Button's genuine, per doz. pairs, discount
37½ to 40 per cent.
Button's imitation per doz. 5 00 9 00
German " 0 60 60

PRESSED SPIKES.
Discount 20 per cent.

PULLEYS.
Hothouse per doz. 0 55 1 00
Axle " 0 22 0 33
Screw " 0 27 1 00
Awning " 0 35 2 50

PUMPS.
Canadian cistern 1 80 3 60
Canadian pitcher spout 1 40 2 10

PUNCHES.
Saddler's per doz. 1 00 1 85
Conductor's " 3 00 15 00
Finners, solid per set 0 72
" hollow per inch 1 00

RAKES.
Wood per doz. net 1 20 up

RAZORS. per doz.
Elliot's 4 00 18 00
Geo. Butler's & Co.'s 4 00 18 00
Boker's 7 50 11 00
" King Cutter 12 50 15 00
Wade & Butcher's 3 60 10 00
Theile & Quack's 7 00 15 00
Carbo Magnetic 10 75
Griffon Barber's Favorite 13 00
Griffon No. 65 13 00
Griffon Safety Razors 13 50
Griffon Stropping Machines 13 50
Lewis Bros. " Klean Kutter" 8 50 10 50

REGISTERS.
Discount 40 per cent.

RIVETS AND BURRS.
Iron Rivets, black and tinned, discount 60 and
10 per cent.
Iron Burrs, discount 55 per cent.
Extras on Iron Rivets in 1-lb. cartons, ½c.
per lb.
Extras on Iron Rivets in ½-lb. cartons, 1c.
per lb.
Copper Rivets, with usual proportion burrs, 45
per cent. discount. Cartons, 1c. per lb.
extra, net.
Copper Burrs only, discount 30 and 10 per cent.
Extras on Tinned or Coppered Rivets, ½-lb.
cartons, 1c. per lb.

RIVET SETS.
Canadian, discount 35 to 37½ per cent.

ROPE, ETC.
Sisal 0 11½
Pure Manila 0 14½
"British" Manila 0 12
Cotton, 3-16 inch and larger 0 21
" 5-32 inch 0 25
" 1 inch 0 25
Russia Deep Sea 0 08
Jute 0 10½
Lath Yarn, single 0 11
" double 0 11
Sisal bed cord, 48 feet per doz. 0 65
" 60 feet " 0 80
" 72 feet " 0 95

RULES.
Boxwood, discount 55 per cent.
Ivory, discount 37½ to 40 per cent.

SAD IRONS.
Mrs. Potts, No. 55, polished per set 0 80
" No. 50, nickel-plated, " 0 90
Common, plain 4 50
" plated 5 50

SAND AND EMERY PAPER.
B. & A. sand, discount, 40 and 5 per cent.
Emery, discount 40 per cent.
Garnet (Rurton's) 5 to 10 per cent. advance
on list

SAP SPOUTS.
Bronzed iron with hooks per 1,000 7 50
"Eureka" tinned steel, hooks " 8 00

SAWS.
Hand, Disston's, discount 12½ per cent.
S. & D., discount 40 per cent.
Crosscut, Disston's, 3 per foot 0 35 0 55
S. & D., discount 35 per cent. on Nos. 2 and 3.
Hack, complete each 0 75 2 75
" frame only each 0 50 1 25

SASH WEIGHTS.
Sectional per 100 lb. 2 00 2 25
Solid 1 50 1 75

SASH CORD.
Per lb. 0 28 0 30

SAW SETS. per doz.
Lincoln and Whiting 4 75
Hand Sets, Perfect 4 00
X-Cut Sets, " 7 50

SCALES.
Gurney Standard, 40 per cent.
Gurney Champion, 50 per cent.
Burrow, Stewart & Milne—
Imperial Standard, discount 40 per cent.
Weigh Beams, discount 35 per cent.
Champion Scales, discount 50 per cent.
Fairbanks standard, discount 35 per cent.
" Dominion, discount 55 per cent.
" Richelieu, discount 55 per cent.
Warren's new Standard, discount 40 per cent.
" Champion, discount 50 per cent.
" Weighbeams, discount 35 per cent.

SCREW DRIVERS.
Sargent's per doz. 0 65 1 00

SCREEN DOORS.
Common doors, 2 or 3 panel, walnut
stained, 4-in. style per doz. 6 50
Common doors, 2 or 3 panel, yellow and
green stained, 4-in. style per doz. 6 75
Common doors, 2 or 3 panel, in natural
colors, oil finish per doz. 8 75
3-in. style 20c. per dozen less.

SCREWS.
Wood, F. H., bright and steel, discount 87½
per cent.
Wood, R. H., bright, dis. 82½ per cent.
" F. H., brass, dis. 80 per cent.
" R. H., " dis. 75 per cent.
" F. H., bronze, dis. 75 per cent.
" R. H., " dis. 70 per cent.
Drive Screws, dis. 87½ per cent.
Bench, wood per doz. 3 25 4 00
" iron 4 25 5 00
Set, case hardened, dis. 60 per cent.
Square Cap, dis. 50 and 5 per cent.
Hexagon Cap, dis. 45 per cent.

SCYTHES.
Per doz. net 6 00 9 00

SCYTHE SNATHS.
Canadian, discount 40 per cent.

SHARPERS.
Bailey Cutlery Co., full nicked, discou
and 2½ per cent.
Bailey Cutlery, Japan Handles, discount 67½
per cent.
Seymour's, discount 50 and 10 per cent.

SHOVELS AND SPADES.
Canadian, discount 45 per cent.

SINKS.
Cast iron, 16 x 24 0 85
" 18 x 30 1 00
" 18 x 36 1 40

SNAPS.
Harness, German, discount 25 per cent.
Lock, Andrews' 4 50 11 50

SOLDERING IRONS.
1, ½-lb. per lb. 0 37
2-lb. or over 0 34

SQUARES.
Iron, No. 493 per doz. 2 40 2 55
" No. 494 3 25 3 40
Steel, discount 60 to 60 and 5 per cent.
Try and Bevel, discount 50 to 52½ per cent.

STAMPED WARE.
Plain, discount 75 and 12½ per cent. off re-
vised list.
Retinned, discount 75 per cent. off revised list.

STAPLES. 3 00
Plain 2 80
Coopers', discount 45 per cent.
Poultry netting staples, discount 40 per cent.

STOCKS AND DIES.
American discount 25 per cent.

STONE.
Washita per lb. 0 28 0 60
Hindostan 0 06 0 07
" slip 0 09 0 13
Labrador 0 15
" Axe 0 30
Turkey 1 50
Arkansas 0 10
Water-of-Ayr 3 50 5 00
Scythe per gross 25 00
Grind, 2-in., 40 to 200 lb., per ton 28 00
" under 40 lb., " 29 00
" under 2 in. thick, " 7 00

STOVEPIPES. 7 00
5 and 6 inch, per 100 lengths 7 50
7 inch. EXAMELINE STOVE POLISH.
No. 4, 3 doz. in case, net cash 4 80
No. 6, 3 doz. in ase. 8 40

TACKS, BRADS, ETC.
Carpet tacks, blued 80 and 15
" tinned 80 and 20
" (in kegs) 40
Cut tacks, blued, in dozens only 60
" ½ weights 80

Swedes cut tacks, blued and tinned—
In bulk 80 and 10
In dozens 75
Swedes, upholsterers', bulk, 85, 12½ and 12½
brush, blued and tinned 70

Swedes, gimps, blued, tinned and
japanned 75 and 12½
Zinc tacks 35
Leather carpet tacks 55
Copper tacks 50
Copper nails 52½
Trunk nails, black 65 and 5
Trunk nails, tinned 65 and 5
Chair nails, blued 35
Patent brads 40
Fine finishing 40
Lining tacks, in papers 10
" in bulk 15
" solid heads, in bulk 75
Saddle nails, in papers 10
" in bulk 15

Tufting buttons, 12 line, in doz-
ens only 60
Zinc glaziers' points 5
Double pointed tacks, papers 90 and 10
" bulk 40
Cinch and duck rivets 45

TAPE LINES.
English, ass skin per doz. 2 75 5 00
English, Patent Leather 5 50 9 75
Chesterman's each 0 90 2 85
" steel each 0 80 8 00

TINNERS' SNIPS.
Per doz. 3 00 15 00

THERMOMETERS.
Tin case and dairy, discount 75 to 75 and 10
per cent.

TRAPS (steel).
Game, Newhouse, discount 25 per cent.
Game, H. & N., P. S. & W., 65 per cent.
Game, steel, 72½, 75 per cent.

TROWELS.
Disston's, discount 10 per cent.
German per doz. 4 75 6 00
S. & D., discount 35 per cent.

TWINES.
Bag, Russian per lb. 0 27
Wrapping, cotton, 3-ply 0 24
" 4-ply 0 27
Mattress per lb. 0 33 0 45
Staging 0 27 0 35

VISES.
Wright's 0 13½
Brook's 0 12½
Pipe Vise, Hinge, No. 1 3 50
" No. 2 5 50
Saw Vise 4 50 9 00

Blacksmiths' (discount) 60 per cent.
" parallel (discount) 45 per cent.

ENAMELLED WARE.
White, Princess, Turquoise, Blue and White
discount 50 per cent.
Diamond, Famous, Premier, discount 50 and
10 per cent.
Granite or Pearl, Imperial, Crescent, discount
50, 10 and 10 per cent.
Premier steel ware, 40 per cent.
"Star" decorated steel and decorated white,
25 per cent.

WIRE.
Smooth Steel Wire.
No. 0-9 gauge \$2 50
10 " 6c extra.
11 " 12c
12 " 20c
13 " 30c
14 " 40c
15 " 55c
16 " 70c

Add 60c. for coppering and \$2 for tinning.
Extra net, per 100 lb.—Oiled wire 10c.,
spring wire \$1.25, special bay baling wire 30c.,
best steel wire 75c., bright soft drawn 15c.,
charcoal (extra quality) \$1.25, packed in casks
or cases 15c., bagging and papering 10c., 50
and 100-lb. bundles 10c., in 25-lb. bundles
15c., in 5 and 10-lb. bundles 25c., in 1-lb.
hanks, 50c., in ½-lb. hanks 75c., in ¼-lb.
hanks \$1.

Fine Steel Wire, discount 25 per cent.
List of extras: In 100-lb. lots: No. 17,
\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—
No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No.
24, \$8—No. 25, \$9—No. 26, \$9.50—No. 27,
\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—
No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,
\$17. Extras net—tinned wire, Nos. 17-25,
\$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,
5c.—oiling, 10c.—in 25-lb. bundles, 15c.—in 5
and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.
—in ½-lb. hanks, 35c.—in ¼-lb. hanks, 50c.—
packed in casks or cases, 15c.—bagging or
papering, 10c.

Brass wire, discount 60 per cent. off the list.
Copper wire, discount 60 per cent. net cash
30 days, f.o.b. factory.
Galvanized wire, per 100 lb.—Nos. 4 and 5,
\$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.15
—No. 9, \$2.55—No. 10, \$3.20 to \$3.20
—No. 11, \$3.25 to \$3.25—No. 12, \$2.65—
—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.
15, \$4.30—No. 16, \$4.30. Base sizes, Nos.
6 to 9, \$2.27½ f.o.b. Cleveland. In carlots
12½c. less.

Clothes Line Wire, regular 7 strand, No. 17,
\$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow
6 strand, No. 17, \$4.30; No. 18, \$2.70; No.
19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,
Toronto, Montreal.

WIRE FENCING
Galvanized barb 2 75
Galvanized, plain twist 2 80
Galvanized barb, f.o.b. Cleveland, \$2.55½ in
less than carlots, and \$2 45 in carlots.

COILED SPRING WIRE.
High Carbon, No. 9 \$2 70
" No. 11 3 30
" No. 12 2 95

WIRE CLOTH.
Painted Screen, per 100 sq. ft., net 1 50
Terms, 2 per cent. off 30 days.

WASHING MACHINES.
Round, re-acting, per doz. 3 00
Square 3 00
Eclipse, per doz 15 00
Downsall 3 00
New Century, per doz 72 00

WRINGERS.
Leader per doz. 30 00
Royal Canadian 24 00
Royal American 24 00
Sampson 27 00
Lightning 27 00
Terms, 4 months, or 3 per cent. 30 days.
WROUGHT IRON WASHERS.
Canadian make, discount 40 per cent.

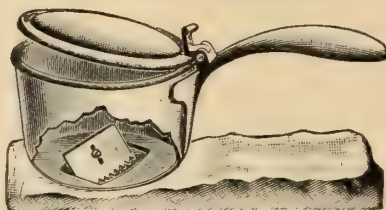
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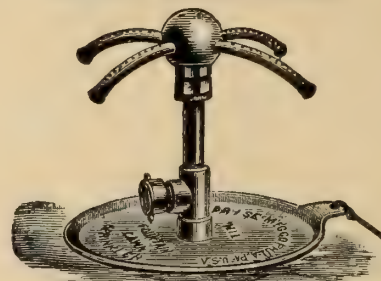
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For Shaving Ice, Coarse or Fine.



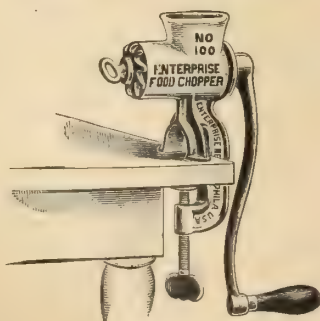
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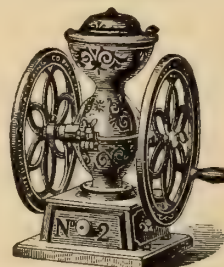


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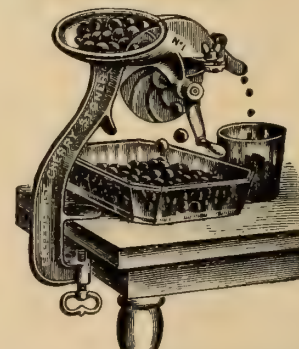
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5 Sizes and Styles, Tinned or Japanned



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VOL. XVI.

MONTREAL AND TORONTO, MAY 28, 1904.

NO. 22



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IS USED TO CHARGE THIS SYPHON.



RETURNED
MAY 28 1894



Fig. 1.

No. 32

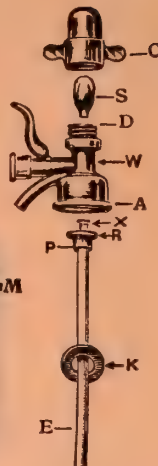


Fig. 2



No. 25

INSTRUCTIONS.

Unscrew at (A) and remove the Syphon head and tube (Fig. 2).

Fill the bottle with cold water up to the **strand M** only. Mineral Salts, such as the Potash, Soda, Lithia, Carlsbad, etc., supplied in Tablets by the Manufacturers, are the only additions that should be made to the water in the Syphon. **Wine, Milk, Syrup, or Flavoring Essences have a tendency to clog the Syphon Valve.**

The bottle **must in no case be filled above the line at M**, as otherwise the Syphon will be damaged and rendered useless.

Replace the head (Fig. 2) (carrying the tube E) on the bottle (Fig. 1) and screw down **tightly** so as to make a tight joint between the head and the bottle neck.

Having screwed down the head as explained, unscrew and remove the fly cap C. Insert a large "Sparklet" Bulb (B size) neck downwards (see Fig. 2S) in the rubber washer inside the bulb holder D.

Screw the fly cap C on over the Bulb, turning it **gradually and slowly** so as to press the Bulb against the piercing pin at the bottom of the holder D. As soon as the pin pierces the Bulb the gas will escape down the Syphon tube E into the bottle. It is very **desirable that the gas should be admitted as slowly as possible**; when, therefore, the bubbles escaping from the end of the glass tube show that the gas is first entering the liquid, the bottle should be **well shaken** before and whilst the remainder of the gas is admitted by further turning the cap.

Shake briskly and **very** thoroughly during and for a few moments after the admission of the gas.

The Aeration is more permanent if the liquid is allowed to stand for a few minutes before using.

When all the liquid is used remove the fly cap C and extract the empty Bulb, as the rubber washer will rapidly perish if left long in contact with the neck of the Bulb. It is also advisable to loosen the Syphon head a little, as, by so doing, the washer K will be found to last much longer than if the head be always kept screwed down tight when the Syphon is not in use. **On no account, however, must the Cap C be removed or the Syphon head be loosened while any liquid remains in the Syphon.**

NOTE.—The tube is only loosely attached to the head, being kept in position inside the stem W by means of a rubber washer round a small projection X on the top of the tube, and can be readily removed if desired. It is not, however, advisable to remove it except for the purpose of renewing either the glass tube or the flat washer K. When replacing the tube after removal, care must be taken to see that the flat washer K is in position round the metal collar P, close up under the flange R, and that the tube is pushed home into the head as far as it will go. For this purpose the washer round the projection X should be slightly moistened.

If the fly cap C does not screw on readily, or if the Syphon head does not tighten readily on the bottle neck, apply a little vaseline or similar lubricant.

Keep the bottle clean, and do not use it if starred or cracked. Unused "Sparklet" Bulbs must not be thrown into the fire.

Examine the pin, the Bulb-neck washer and the tube washer K (the only parts which wear out with use) from time to time, and if either of them shows signs of wear, replace by new ones.

During hot weather it is essential that the liquid to be aerated be kept cool.

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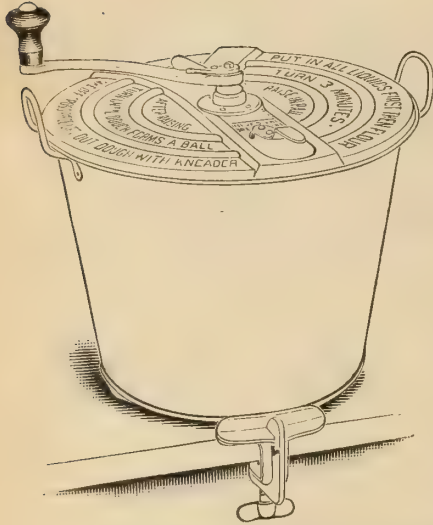
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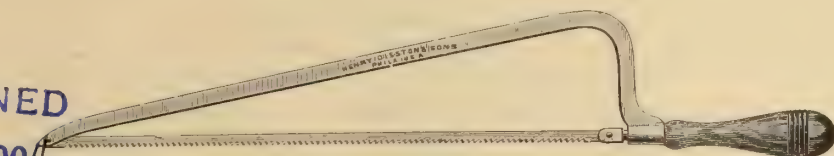
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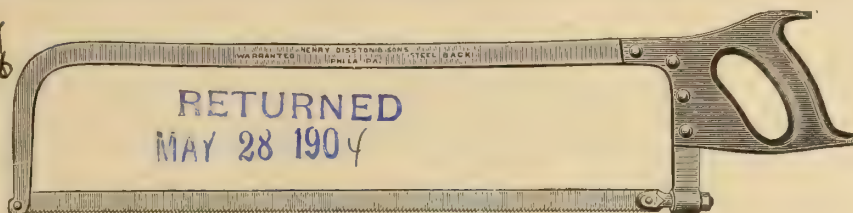
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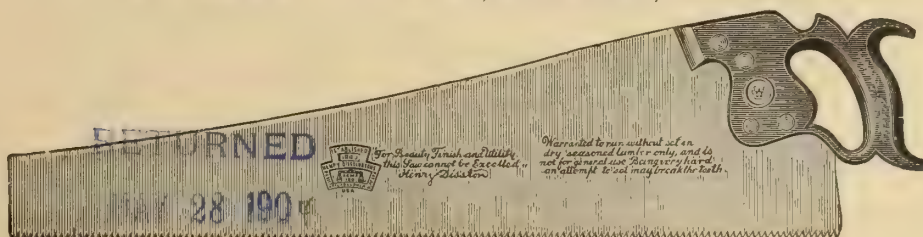


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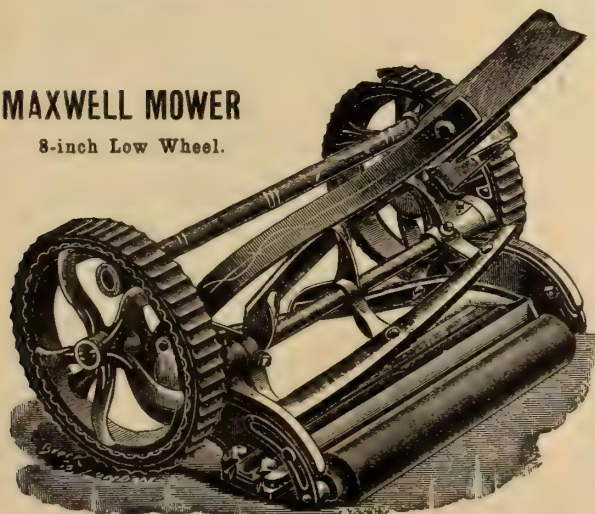
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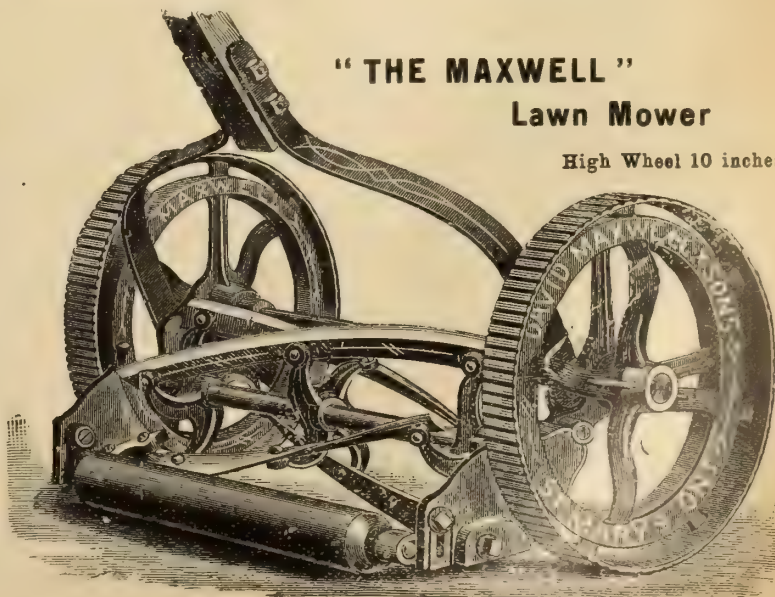
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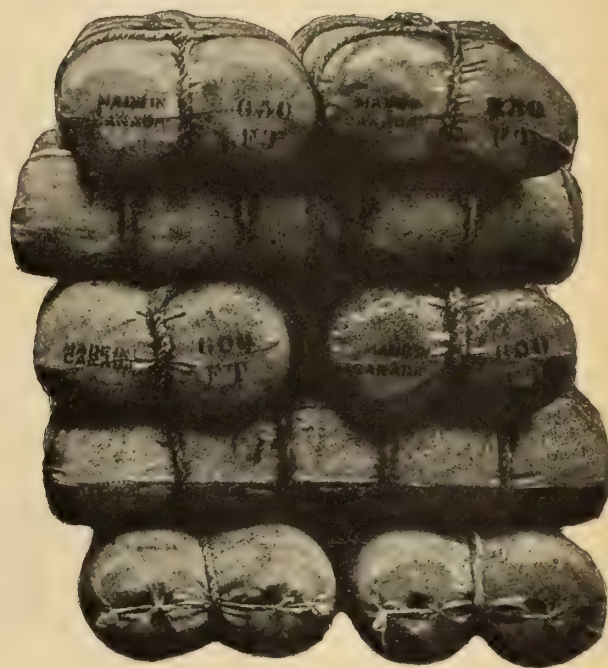
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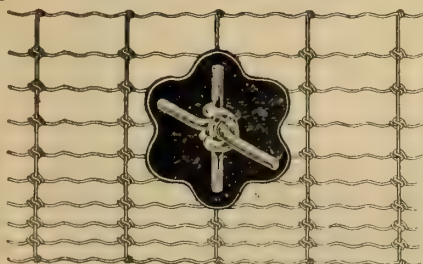
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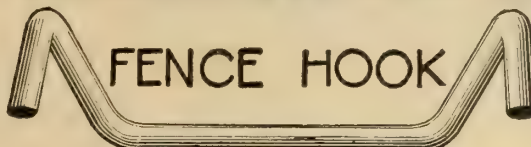
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ALMOST WATERPROOF

CANADA PAPER CO.
TORONTO LIMITED MONTREAL

GALVANIZED FENCE HOOK

FOR FASTENING WOODEN PICKET ON WIRE FENCE.



FENCE HOOK

WIRE NAILS, COILED SPRING, BARB and PLAIN FENCE WIRE, OILED and ANNEALED, CLOTHES LINE WIRE, STAPLES, etc.

THE WESTERN WIRE & NAIL CO., Limited,

LONDON, ONT



"Little Shaver"

Cutest Thing in the Kitchen

Shaves chocolate so thin that it dissolves without stirring. Slices Potatoes, Radishes, Cucumbers, Onions, Apples and all the smaller fruits and vegetables. Made of black walnut. Knife is fine tempered steel.

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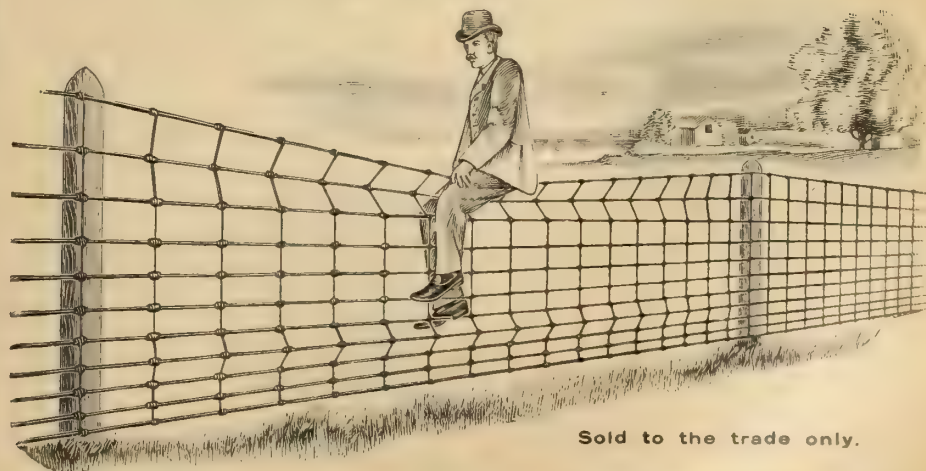
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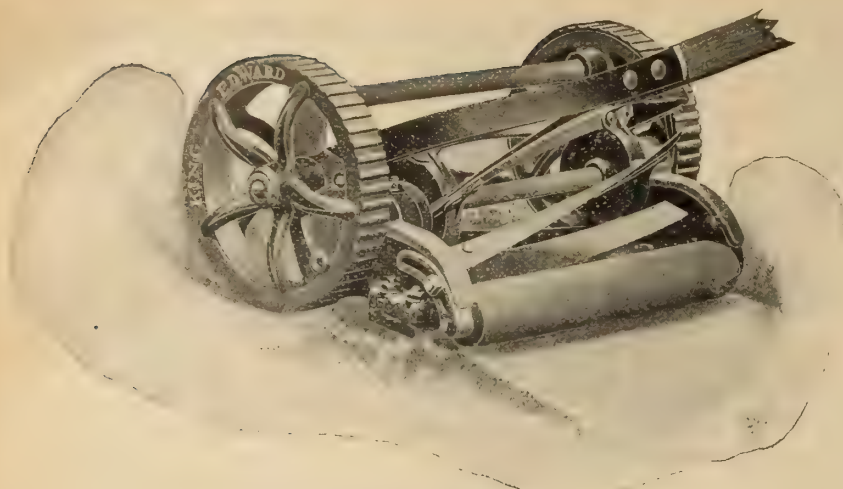
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Owen Sound, Ont.



The "KING EDWARD."

A cheap Lawn Mower
may prove to be a
very dear one

—for the customer, and
 for the man who sold it.

There is safety in
Taylor-Forbes Mowers.

- † Shipped promptly.
- † All Mowers liberally guaranteed.
- † Repairs can be quickly obtained.
- † Catalogue B will help you make up your order.
- † Get through your jobber.

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The largest manufacturers of Hardware in Canada.

SEASONABLE GOODS



Water Coolers.

Handsomely Jappanned and
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Nickel Plated Faucets,
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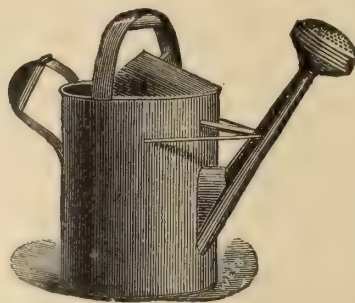
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Galvanized, 3 Sizes.

All supplied with our patent Rose.



Novelty Refrigerators and Water Coolers

3 Sizes Made of Galvanized Iron.
 Decorated in Oak. Separate compartment for Ice,
 with Nickel-plated Faucet attached.

WE WILL BE PLEASED TO QUOTE YOU.

KEMP MANUFACTURING CO., TORONTO, CAN.

The Evolution of Electric Lighting

By F. S. K.

CHINESE legends dating back to remote antiquity tell of the early knowledge possessed by them of the north and south directive tendencies of the lode-stone. The ancients were also conversant with the fact that by rubbing amber with a dry cloth it could be made to attract feathers and small bodies. No progress was made, however, until the genius of the immortal Gilbert shone forth, about the close of the sixteenth century, and to him belongs the credit of being the founder of electrical science, to which he applied the term "Electrics." The next to advance in this direction was Otto Von Guericke, who produced the first machine ever built for generating electricity. This was two hundred and fifty years ago. His machine consisted of a sulphur globe, having an iron axis on which it was turned, while friction was applied by the hand. He noticed the machine gave forth crackling sparks and brushes of fire, which were plainly visible in a dark room. This is the earliest recorded observation of an electric light.

For the next hundred and fifty years nothing of paramount importance was deduced, although investigators had been at work from time to time, and several striking discoveries were made. It was during this period that electricity was first conducted, which was done by Gray in 1730. He used a damp string for a conductor and wax for insulators. The idea of using wire was not thought of until later on. Some time after Von Kliest tried to bottle up electricity, which resulted in the discovery of the Leyden jar, the discharges of which were likened to thunder and lightning. It remained for Franklin, in 1752, by his famous kite experiment to demonstrate the absolute identity between these two phenomena.

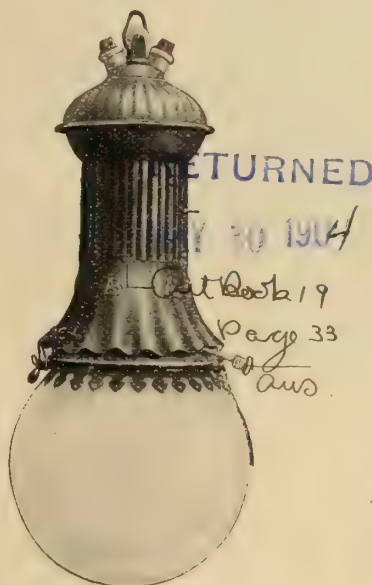
It was not until the last year of the eighteenth century that a new era in electrical development was instituted by Volta in his discovery of the electric battery, and this comparatively powerful source of electricity opened a wide path into fresh fields of discovery. In 1810 Humphrey Davy, with a battery of

2,000 pairs of copper and zinc, amazed the world with his first electric arc, which was produced between two charcoal points. The charcoal was soft, however, and with no controlling device the light was naturally of an uncertain nature. This remained only as a brilliant laboratory experiment until 1844, when Faucault, using Bunsen batteries and electrodes of hard gas carbon, succeeded in getting a steady light, the value of which was at once recognized. Thirteen years previous to this Michael Faraday gave to the world the result of his classic discovery of electric induction, without which the present high

ated, marking the first permanent and practicable application of the electric arc. In 1870 Gramme invented the method of winding armatures which bears his name, and several large generators were built for commercial purposes. The clock tower on the House of Parliament, in London, was illuminated for several months by arc lights supplied by these machines. Some time after they were also employed for lighting in the British and other navies, but the large first cost of these plants, together with large operating expenses, prevented their being used to any great commercial extent. In the United States other systems were being worked out, and one of them, invented by Brush, was so perfect and substantial in its details that it at once came to the front, and has maintained a leading position to the present day.

Up to 1879 the incandescent lamp had received little thought outside of the laboratory. In this year, Swan in England made and exhibited an incandescent lamp having a carbon filament. However, the credit for perfecting and putting upon a commercial basis the domestic use of the incandescent lamp belongs to Edison, whose brilliant and masterly work in that line is well known. That same year he went to work with his characteristic ardor and perseverance to make the incandescent lamp an industrial success, the result of which is felt to-day in every town and city in the land. At Menlo Park his laboratory was fitted up and ample funds were supplied him to carry on his investigations. Almost every conceivable material was tried to get a suitable filament, and men were sent to many foreign countries to collect and forward all kinds of vegetable fibres that might possess the necessary characteristic. In describing the circumstances, W. S. Andrews, one of Edison's assistants, says:

"After many months of careful investigation, during which filaments were made from a great variety of materials, such as wood, cotton, paper, graphite, lamp black and various vege-



A Modern Street Lamp, The R.E.T. Pringle & Co.

state of development in electric lighting would be entirely impossible. This discovery soon began to bear fruit, and different inventors set to work to produce electro magnetic machines which were more or less successful.

The first English patent on an arc lamp was issued to Stark in 1856, but it was not found practicable. A short time after Serrins patented a lamp that was more successful, and to which other inventors added further improvements. Some comparatively large electro magnetic machines were built, and in conjunction with a Serrins arc lamp the lighthouse of Dunoon was illumin-

table fibres, it was found that the carbonized outer shell of the bamboo cane gave the best results, so this material was finally adopted and used for many years thereafter.

"The discovery of a suitable substance for the incandescent lamp filament was obviously only a small part of the work to be accomplished, for Edison had set himself the task of designing a comprehensive electric lighting system to be complete in its minutest details from the generators to the lamps. It was something absolutely new and untried, inasmuch as it was a low voltage multiple arc system in which each lamp was to be an independent unit which could be lighted or extinguished without affecting any other lamp on the circuit, whereas previous electric lighting with arc lamps had been operated on the series system, involving a certain voltage for each lamp and therefore a total voltage higher in direct proportion to the number of lamps included in a circuit.

"Many eminent scientists pronounced Edison's plans chimerical and impossible to be put into practice, but no discouragement could dampen his ardor or weaken his faith in final success, so the work of development steadily progressed. One hundred and ten volt shunt wound generators were designed and built. Crude switches, lamp sockets and safety appliances were devised and made up. Copper wire was laboriously covered with hemp cord, painted over with coal tar and laid in the ground in wooden troughs. Wooden lamp posts were erected and fitted with large round globes of clear glass to protect the lamps and sockets within, and at last in the early winter of 1880-1881, the work of installation was completed and the snow covered woodlands for a quarter of a mile around the Menlo Park laboratory were illuminated night after night by glittering rows of 110 volt incandescent lamps, which presented much the same appearance as those which we see any night. The surrounding residences had also been wired and were brilliantly lighted every night with the new incandescent lamp.

"People came from far and near to see this wonderful exhibition which marked the beginning of the industrial era of domestic electric lighting and

the daily papers were full of the possibilities and impossibilities of the new illuminant."

Lighting plants were soon established in New York and London, where some of Edison's "Jumbo" generators supplied light at 110 volts, but the cost of copper was enormous and the size of the machines out of all proportions to their output. The sphere of this low voltage direct current was naturally limited, and it was not until alternating current machines were built and installed that rapid strides in the art of incandescent lighting were made.

A history of recent development would be a history of the large electrical companies, where new apparatus is design-

United States alone at the present time, and twenty-five years ago there was not a single plant in existence.

AUTOMOBILE RACING STOPPED.

Action was taken by the City Council of Montreal this week in connection with the regulation of speed of automobiles. There was already an existing by-law prohibiting any vehicle being run on the streets at a greater rate than six miles an hour. It was claimed that nothing was done to prevent fast riding, and one alderman said it was not uncommon to see automobiles running along the streets at twenty miles an



A Modern Incandescent Lamp for Street Lighting.

ed and improved upon from time to time. To describe the systems, machines and apparatus in use to-day for arc and incandescent lighting would fill a volume. So rapid has progress been in recent years that standard apparatus is only now beginning to be a certainty. Quite recently Nernst lamps and mercury arcs have been introduced into the electric lighting field, but what part they are destined to play is as yet not a possible prophesy. Some idea of the extent of the development of electric lighting may be had when it is known that there are five hundred million dollars invested in central station lighting plants in the

hour. A motion was put and carried that the by-law be fully enforced.

WIRE NAILS TACKS WIRE

Prompt Shipment

The **ONTARIO TACK CO.**
Limited
HAMILTON, ONT.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Automobile Supplies.

JOHN MILLEN & SONS, Montreal and Toronto, are issuing to the trade an illustrated catalogue of automobile supplies. This is a line of goods which this firm have made one of their distinctive specialties, and no dealer who handles these supplies should fail to send for a copy. In presenting their 1904 line of solar, motor, cycle and launch lamps, John Millen & Sons wish particularly to impress upon discerning purchasers that solar lamps are not experiments, but are, instead, a finished and scientifically constructed product of one of the oldest and largest makers of acetylene lamps in the world. Each and every lamp, both gas and oil, turned out of their factory, is fully guaranteed.

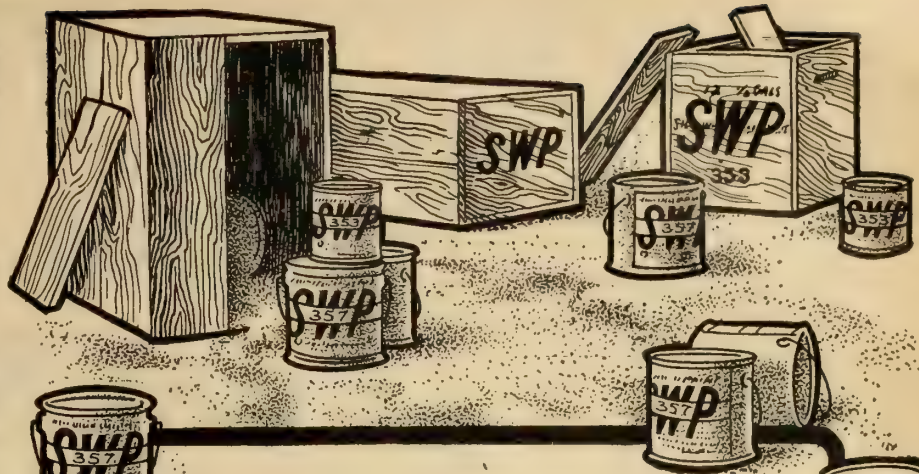
The catalogue is well illustrated and shows an extensive line of Tonneau tail lamps, oil side lamps, solar dash gas lamps, carriage lamps, etc. The 1904 model launch headlight is moderate in price and is selling well. Automobile horns and dry batteries, etc., are also illustrated and described. Write for a copy.

Arc Lighting.

Hardware and Metal has received from the **R. E. T. Pringle Co., Limited**, Montreal and Toronto, a few of the latest bulletins of the **Adams-Bagnall Electric Co., Cleveland, Ohio**, whose Canadian agents the **R. E. T. Pringle Co., Limited**, are. The latest is the 1904 bulletin, No. 18, which contains valuable information regarding alternating current series arc lighting. Bulletin No. 26 contains directions for installing the **Adams-Bagnall** alternating constant current regulators. In bulletin No. 25 is contained information for operating "A-B" constant current alternating enclosed arc lamps. To those interested in this subject a complete set of these bulletins would be of great value, and readers of **Hardware and Metal** may get them by applying directly to the **Adams-Bagnall Electric Co., Cleveland, Ohio** through the **R. E. T. Pringle Co., Limited**, Montreal.

Crocker-Wheeler Co.

The **Crocker-Wheeler Co.**, manufacturers and electrical engineers, **Ampere, N. J.**, are sending out a bulletin



Paint Profits.

If you are selling paints to make money, you want to make the most money and to do the largest business.

It takes the best paint and the most push to do the biggest business. The better the paint and the greater the push, the bigger the business. You want quality—but you want more—you must have push—progress—advertising.

If you want the best of these—the finest quality and the most effective advertising—the most helps—the biggest and most profitable paint business, write now for our 1904 Agency Proposition.



THE SHERWIN-WILLIAMS CO.
PAINT AND VARNISH MAKERS

CANADIAN DIVISION,

Headquarters—21 St. Antoine St., Montreal.

Depots—86 York St., Toronto; 147 Bannatyne St., East, Winnipeg.

1184

containing the report of a series of articles which appeared in **Electrical World and Engineer**, on the electrical equipment of the largest printing office in the world, the **Government printing office**.

Cleveland Twist Drill Co.

Hardware & Metal has received from the **Cleveland Twist Drill Co., Cleveland, O.**, a copy of their booklet entitled, "Twist Drills; their Uses and Abuses." In this booklet the company present a brief and comprehensive collection of ideas based on their own practice and observation regarding the use of twist drills in order to get the best cutting capacity, combined with the maximum durability. The ideas are acknowledged by the company not to be all new, and contain much that may already be familiar to machinists. However, to a number of those whose experience with twist drills is not very

extensive, it will prove of considerable value. Readers of **Hardware and Metal** may secure a copy of the booklet upon application to the **Cleveland Twist Drill Co., Cleveland, Ohio**.

An Error Corrected.

In the notice last week of the **Pittsburg Steel Co.'s** catalogue, a typographical error occurred. The address of **J. W. Taylor**, the Canadian representative of this company, is 338 St. James street, Montreal, (not 388, as stated in last issue). **Hardware and Metal** readers writing for these catalogues should note this correction.

Calipers and Dividers.

Hardware and Metal has received a booklet illustrating and describing a new line of calipers and dividers that have been placed upon the market by the makers. These tools show a departure from the well known lines of this class,

in that the legs are round and not flat, which feature adds materially to the stiffness and gives a neatness and finish that could not otherwise be obtained. Readers of Hardware and Metal may secure a copy of this booklet upon application to Brown & Sharpe Mfg. Co., Providence, R. I.

Steam Heating.

The Union Steam Pump Co., Battle Creek, Mich., have issued a very interesting folder, entitled "Hints on Modern Steam Heating," which contains some very useful information regarding the vacuum system of steam heating.

Pumping Machinery.

Fairbanks, Morse & Co., Chicago, are sending out their 1904 catalogue, No. 48, describing and illustrating steam and power pumping machinery. Since the issuing of their last catalogue this firm have increased their facilities for manufacturing steam pumps, and having during the past year equipped a new factory. They claim that this catalogue illustrates marked advances in the design of pumps, and so anyone interested in pumping machinery should secure one of these catalogues.

IVER JOHNSON REVOLVERS



Wherever you see the sign, it stands for revolver supremacy and suggests **IVER JOHNSON PRODUCTS**. Iver Johnson Revolvers have the largest sale of any in the world.

Best Advertised—Best Known.

Send for Catalogue.

IVER JOHNSON'S ARMS & CYCLE WORKS,

New York Office, 99 Chambers Street.

FITCHBURG, MASS.

Business Changes

ONTARIO.

I. Moquin & Co., Crysler, general merchant, has assigned.

B. Brooks, of the firm of B. Brooks & Sons, contractors, Windsor, is dead.

J. Murphy & Bro., general merchants, Coldwater, have sold out to Garrett & Horrell.

The assets of E. A. Gauthier & Co., general merchants, Plantagenet Springs, have been sold.

S. A. Gray & Co., Meaford, general merchants, have suffered loss by fire; loss covered by insurance.

I. Moquin & Co., Crysler, general merchants, announced a meeting of creditors for the 26th inst.

Chadwick Bros., metal and brass manufacturers, Hamilton, have sustained loss by fire; insurance covers the loss.

QUEBEC.

The Canadian Electric Co., Montreal, have registered.

Laurin & Leitch, contractors, Montreal, have registered.

A. Messier, general merchant, Isle Aux Noix, has registered.

A. Frenette & Cie., brickmakers, Beauport, have registered.

Brunet & Brunet, brick contractors, Montreal, have registered.

Champagne Freres, plumbers, etc., Montreal, have registered.

P. Morin, general merchant, St. Thibault, has offered to compromise.

Gratton & Rheaume, contractors, Montreal, have dissolved partnership.

The assets of J. W. Pouliot, varnish manufacturer, Quebec, have been sold.

G. O. Tousignant, general merchant, Chicoutimi, is offering 35c on the dollar.

The assets of F. Galipeau, general merchant, Weedon Station, have been sold.

The assets of J. L. Sequin, general merchant, St. Simon, are to be sold by tender.

J. Perron, general merchant, St. Paul's Bay, had a meeting to appoint curator on 25th inst.

J. Perron, general merchant, St. Paul's Bay, has assigned; V. E. Paradis provisional guardian.

Wood & Son, general merchants, Pense, have sold out to Stewart & Birt.

E. Nicol & Son, general merchants,

Boissevain, have sold out to Marston & Singleton.

S. Mendlevich, general merchant, Grenfell, has had his stock damaged by fire; no insurance.

Wood, Horne & Co., general merchants, Weyburn, have been succeeded by W. Horne & Co.

The factory of the Ledoux Carriage Co., Montreal, has been burnt; the loss is covered by insurance.

NOVA SCOTIA.

McIntosh & Chisholm, general merchants, Port Hawkesbury, have dissolved partnership.

Declaration of partnership for A. J. Brymer, North Sydney, only to do business under the firm name of the MacNeil Cycle Co., has been registered.

MANITOBA AND N.W.T.

Lawson & Dames, builders, Russel, have been succeeded by E. J. Lawson.

H. Baker, carriage maker, Saskatoon, has admitted G. V. Tupper as partner.

Sedore Bros., harness makers, Killarney, have opened a branch at Rosthern.

BRITISH COLUMBIA.

Spillman & Todd, painters, Vancouver, have dissolved partnership.

May 28, 1904

HARDWARE AND METAL

H. S. HOWLAND, SONS & CO.

LIMITED

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ONLY.

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212-218 Cowan Avenue.

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WHOLESALE.

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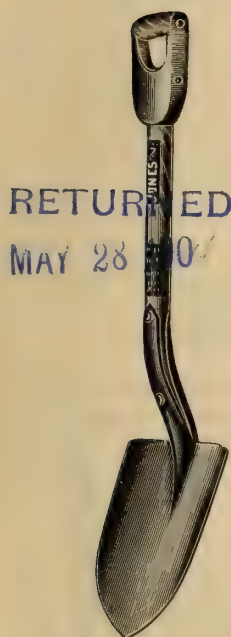
Weed Cutter or Thistle Spud

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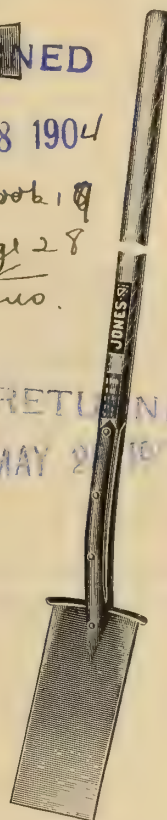
D. H. Rd. Point Shovel
Gilmore
Old's
Gray's
Burns'
Jones'



D. H. Spade
Old's
Gray's
Burns'
Jones'



D. H. Sq. P. Shovel
Gilmore
Old's
Gray's
Burns'
Jones'



L. H. Spade
Old's
Gray's
Burns'
Jones'



L. H. Rd. P. Shovel
Gilmore
Old's
Gray's
Burns'
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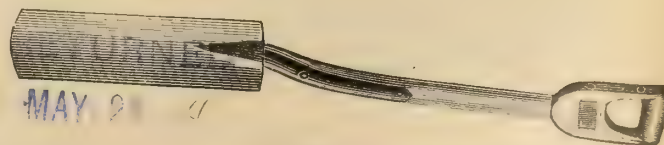
L. H. Sq. P. Shovel
Gilmore
Old's
Gray's
Burns'
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Ditching Spades.



Draining Spade



Post-Hole Spade.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.
Factory: Dufferin Street, Toronto, Ont.

Our prices are right.

New and Second-Hand Machinery,
Engines, Boilers, Belting, Pulleys,
Motors, Etc.

Any readers of this paper wanting
any of the above goods may have
an advertisement inserted free in
HARDWARE AND METAL, the
machinery weekly newspaper of
Canada, by enclosing this notice.
Address

HARDWARE and METAL
Montreal, Toronto, Winnipeg.

The Hamilton Steel & Iron Company

LIMITED

HAMILTON, - CANADA.

**OPEN HEARTH
STEEL CASTINGS
OF ANY WEIGHT.**

ELECTRICIANS' INSULATED PLYERS



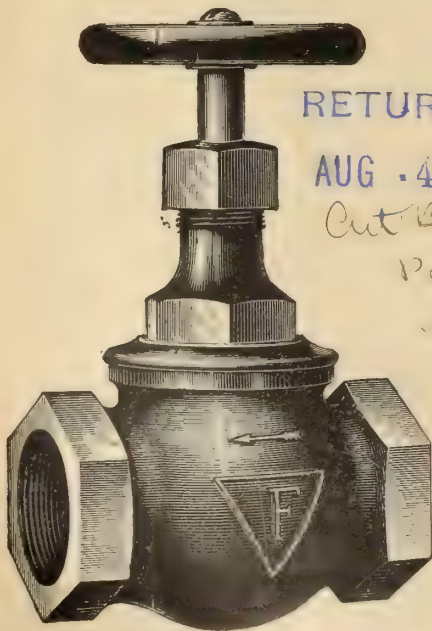
Hard Rubber Handles

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F. W. LAMPOUGH & CO., - MONTREAL.



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AUG .4 1904

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Page 15

**Fairbanks
Renewable**

ASBESTOS DISC

Globe Valves

Last longer and give better satisfaction
than ANY OTHER Globe Valve on the
market.

Send for Catalogue.

The Fairbanks Company

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Toronto

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Vancouver

MACHINERY

THE MACHINERY MARKETS.

Quebec Markets.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, May 27, 1904.

CONSIDERABLE business has been done during the past week in the machinery line, although some dealers report that it is hardly up to what it was a week ago. The impetus given to trade a few weeks since by the advent of Spring and the opening up of navigation is still felt, although not to such a marked degree. However, a good deal of work is being undertaken that was prevented until quite recently, and the machinery market is a direct factor in the benefit derived therefrom. There are a large number of industrial contracts being fulfilled throughout the country, necessitating heavy machinery. The prospects are so bright in this line that contractors are equipping themselves with new and up-to-date apparatus more than ever before. More new machinery and less second-hand is required than formerly.

Wood-working machinery seems to be in greatest demand, and more orders are reported this week, a particularly large one from St. John's, Nfld. A brick yard equipment is also on the list of this week's orders. The trade in contractors' and railway supplies has opened up so well and favorably that 1904 bids fair to equal, if not to surpass, 1903. The trade in electrical machinery is brisk, and a large number of motors have been installed.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, May 28, 1904

THERE is not much change in the market condition this week. The general improvement noted in last week's issue continues, but there is no exceptional feature to be noted. The condition is bright, not a few orders having been closed by local dealers, one or two of which are very large ones.

However, the majority have been small, ordinary deals.

Perhaps in the wood-working machinery line not so much has been done this week as last, but last week's business in that line was exceptionally large, especially with some firms.

The machine tool trade has been good this week, the two largest orders that were placed with local firms being for that class of machinery. Both of these were placed with the Fairbanks Co., one being from the Petrie Mfg. Co., Brantford, and the other from the Canadian Westinghouse Co., Hamilton. The tools were from the Niles-Bement-Pond Co., New York.

The market for engines and boilers continues steady, there being the usual amount of business done in these lines during the past week.

For electrical machinery there has been the usual good demand, there being, however, no very large orders placed with local dealers or manufacturers.

A Powerful Automobile Train.

A RECENT issue of Railway Age contains a description of this train, which is constructed for hauling borax out of Death Valley, California, consisting of the tractor containing the power plant and seven cars. The power is electrically transmitted to one pair of wheels under each car. The power plant consists of a three-cylinder four cycle engine of 75 h.p., directly connected to G. E. generator. The current is delivered to motors on the driving wheels of the tractor end of each car, the advantage being that the paying load of the train is utilized for adhesive weight, and therefore it is not necessary that the tractor have adhesion enough to pull the whole train. Each car has a capacity of 30,000 lbs., and weight, empty, 9,600 lbs. They are almost entirely of steel, the frames being structural shapes. The cars dump by means of swing side doors. The wheels

are of flange boiler type, and connection is made with the motor by means of chains. The train is equipped with Westinghouse air brakes, supplied by a motor-driven compressor in the tractor. The tractor is steered in a similar manner to the ordinary automobile, and the trailer cars are constructed with a fifth wheel and tongue, the tongue of each car coupling to the rear of the car ahead, so that when the direction of the tractor is altered each trail car follows in practically the same arc of a circle.

Hints on Erection of Planers.

SOME valuable hints on the erection of planers are given by a large manufacturer of machine tools, as follows:

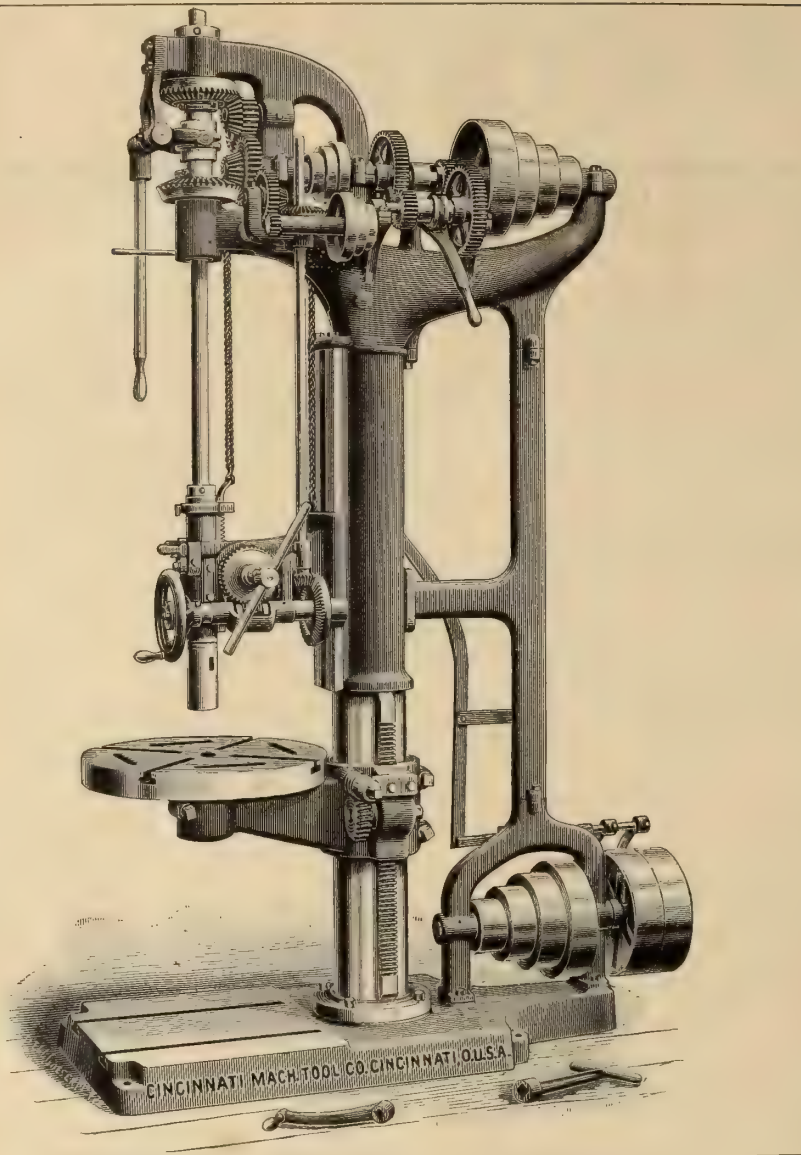
It is not imperative that small planers should have heavy foundations, although it is preferable that they should. However, it is necessary that large planers, namely, from the 36 inch up, should have a good, solid foundation. The foundations that give the best service are of concrete.

The question of foundation being settled, the planer should be carefully levelled in every direction, the table having been removed. The countershaft should be placed one foot in the rear of planer for every ten feet in height, for the reason that the belts shift better when the countershaft is in that position. Belting should always be extra double belting of the full width of pulleys on the machine. The inside large pulley, the driver, is always driven with a cross belt.

Upon starting the machine for the first time every oil hole should be well oiled, in particular the large journals and bearings. Then afterwards the machine should be oiled regularly once a day, and the machine kept in a clean condition.

If it be found necessary, the friction may be adjusted, by loosening the two jam nuts on the rim of the friction and screwing down or up the set screws very slightly. Then tighten up the jam nuts again to hold the set screw.

THE CINCINNATI UPRIGHT DRILL.



24-inch Upright Drill, Cincinnati Machine Tool Co.

AMONG the best drilling machines made in the United States the products of the Cincinnati Machine Tool Co., Cincinnati, O., sold in Canada by H. W. Petrie, must always be included. The illustrations given herewith show one of the newest drills made by this house, also the improved patent geared tapping attachment, as applied to the heavy pattern, sliding head, upright drills.

This improved patent geared tapping attachment makes the drills the most efficient on the market for drilling and tapping, work such as is generally done on high priced machines, and these drills fitted with this attachment are but little higher in price than a machine with friction clutch pulleys when the additional belting and line shaft pulleys are taken into consideration.

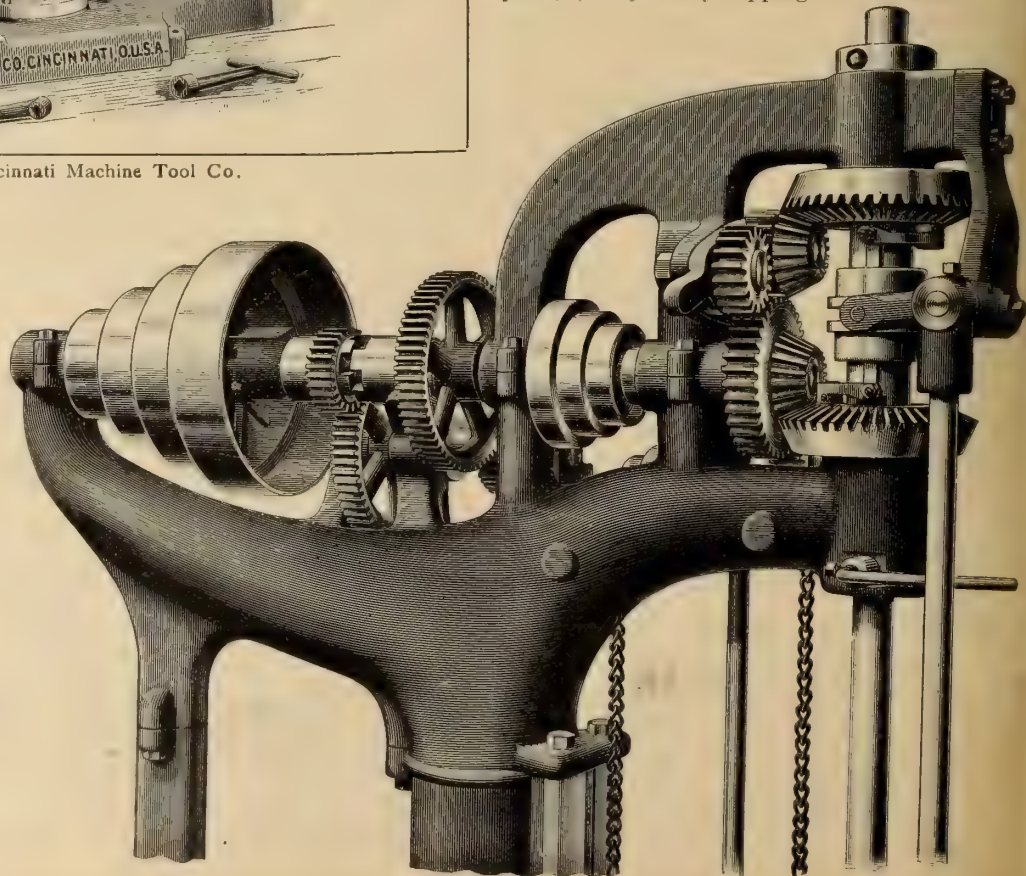
The operator of one of these drills is enabled to do drilling and tapping very

much quicker than he has formerly been able to do on drilling machines arranged with friction clutch pulleys or tight and loose pulleys, as by having full control he is able to stop, start or reverse the spindle instantly, thereby being in position to do more drilling, as the time consumed in making the changes of drills, chucks and sockets is greatly reduced.

With this attachment he can tap right or left hand threads equally well, and a forward movement of the lever, shown at the left, starts the spindle, and when the tap has gone the required depth a movement of the lever in the opposite direction reverses the spindle and returns the tap twice as fast as it went forward in doing the work, the ratio of the attachment being two to one.

When no tapping is to be done for several hours or days the attachment can be disengaged by the movement of a lever for this purpose, thus saving the parts from wear and leaving the machine a standard drilling machine, with the great advantage of being able to stop the spindle instantly for making changes of chucks, sockets and drills without necessitating the stopping of the machine at belt shifter, which would consume much greater time.

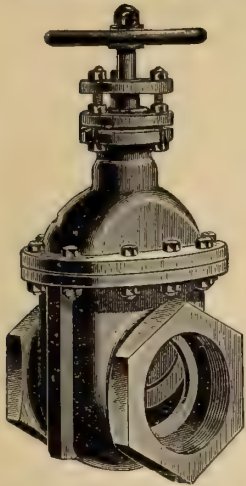
On the Cincinnati upright drills, which are unusually heavy and rigid, with strong gearing and large driving pulleys, very heavy tapping can be done



Patent Geared Tapping Attachment of Cincinnati Drill.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

The Best Door Closer Is . . .
NEWMAN'S INVINCIBLE FLOOR SPRING
 Will close a door silently against any pressure of wind. Has many working advantages over the ordinary spring, and has twice the wear. In use throughout Great Britain and the Colonies. Gives perfect satisfaction. Made only by
W. NEWMAN & SONS,
 Hospital St., BIRMINGHAM



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They give satisfaction every time, Catalogue on application.

The Kerr Engine Co.
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 Walkerville, Ont.

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PENBERTHY INJECTOR Co.,
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 BRASS MFRS. Windsor, Ont.

Buy the Best.



HERCULES

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**IS YOUR
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 Send for Folder No.14.
PULLMAN MFG. CO.
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**WORK AND
PRICES
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GALVANIZING
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**WIND
ENGINE & PUMP CO.**
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BABBIT
 THE
**QUALITY & PRICE TO SUIT
ALL GRADES OF WORK.**
CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



BEAVER POST HOLE DIGGER

will please your customers.
 No wood to rot or check.

SPECIAL DISCOUNTS TO THE TRADE.

CANADA FOUNDRY COMPANY,
 LIMITED

Head Office and Works, TORONTO, ONT.

District Offices — Montreal, Halifax, Ottawa, Winnipeg, Vancouver, Victoria, Rossland.



TO POLISHERS.

If corundum be next in hardness to the diamond, and if emery be iron ore and corundum, (as stated by the United States Government Report), will it not pay you to use our pure Craig Mine Crystal Corundum ?
 It is not adulterated with emery.

Write for Prices.

The Canada Corundum Company, Limited
TORONTO, CANADA.

with this attachment, and, as an example, the 24-inch drill with this attachment handles one and one-half-inch pipe taps, or two-inch standard taps, very satisfactorily. Cast iron parts can be tapped with one-inch, or smaller taps without the use of the back gears, and, since the taps can be started quickly and true, great reductions are made in the cost of tapping over the old methods of doing this class of work.

The attachment contains improved expansion ring friction clutches, which work noiselessly and very satisfactorily, allowing the spindle to be revolved in either direction by the moving of the conveniently placed hand lever shown at the left. While doing light or heavy tapping, these clutches will not stick, and will not require any undue pressure to engage or disengage, an objectionable feature to many friction clutches.

By using the Cincinnati upright drills with this attachment excellent results are obtained, and in nine out of every ten shops where any tapping is to be done the cost of the machine will easily be saved within a very short time. This description applies to the 24-inch drill and larger sizes.

Machinery and Electrical Notes.

The Galt Blast Furnace Co., an industry only just acquired by Galt, is going to build a foundry.

Machinery is being installed as quickly as possible in the C. P. R. shops in Winnipeg.

The ratepayers of St. Catharines have carried the by-law granting the bonus to J. M. Ross & Co., Brantford, manufacturers of traction engines, etc.

The contract for the installation of electric lighting in the new Union Bank building in Winnipeg, has been awarded to the E. S. Harrison Co., Ltd.

The ratepayers of Preston, Ont., are considering the project of purchasing the electric light plant at Blair and moving it to Preston.

The John McDougall Co. is constructing at the Caledonia Iron Works two concentration plants, under license from the Canadian Ore Concentration Syndicate, who control the Canadian patent for the concentration of ores by the Elmore oil process.

The Notre Dame Hospital authorities are now erecting a \$200,000 hospital in Lafontaine Park, Montreal, for contagious diseases. They are installing a complete electric plant, the contract for which is in the hands of the Standard Construction Co., Place d'Armes, Montreal. Besides the service plant there will be special heating apparatus. The wiring of the building is to be in steel conduit, and up-to-date in every particular.

CONDENSED MACHINERY ADVERTISEMENTS.

MACHINERY WANTED.

Notices under this heading inserted free for subscribers to **HARDWARE AND METAL**.

BOILER WANTED—Good second-hand boiler—54 x 12, or 60 x 12; quote lowest cash price. Box M. 8, **HARDWARE AND METAL**, Toronto.

LATHE, screw-cutting, about twelve-inch swing; must be in good order. Box M. 10, **HARDWARE AND METAL**, Toronto.

MINING tools wanted, steam pump or ejector, forge, hammers, sledge, 1-in. steel, etc. Box 15, **HARDWARE AND METAL**, Toronto.

STEAM ENGINE WANTED—About 7 h.p., stationary. Address, with particulars and lowest price, Box M 12, **HARDWARE AND METAL**, Toronto.

WANTED—18-in. turret lathe; second-hand, if in good condition. Box M 13, **HARDWARE AND METAL**, Toronto.

WANTED—Second-hand gasoline engine—in good repair; 2 to 4 horsepower. Box 8, Markham.

WANTED—Immediately—Portable sawmill—to cut from three to five million feet mixed timber, principally birch; would prefer party who would take timber from stump and deliver lumber at station. Hanna & Hutcheson Bros., Huntsville, Ont.

WANTED—Good second-hand jointer and rounder. E. McNabb, Arva P. O., Ont.

WANTED—Hydraulic press; capacity at least 200 tons. Address, giving size and full particulars, to Box M 11, **HARDWARE AND METAL**, Toronto.

MACHINERY FOR SALE.

Special rates will be quoted for notices under this heading for periods of three months or longer.

A GASOLINE ENGINE—That has stood the test and proven to be the most economical ever operated in America. Made by Tuerk Iron Works, Berlin, Ont.

BLACKSMITH'S tools, stock and woodworking tools in first-class shape. Apply G. H. Morris, Hatchley P. O.

ENGINES—Gas, gasoline, stationary and marine. E. Housey, manufacturer; 815 Queen west, Toronto.

FOUR double drum hoisting engines for immediate delivery; with or without boilers. H. W. Petrie; Toronto.

ELEVATORS for freight and passenger service. Write for particulars to Parkin Elevator Works, Hamilton, Ont.

ESTIMATES given on forced and induced draft fans for steam plants. Sheldon & Sheldon, Galt.

GAS and gasoline engines, stationary, marine, automobile; also launches; silver medal, highest award Dominion Exhibition, Toronto; also Toronto Exhibition, 1902; write for catalogue. The Gasoline Engine Co. of Toronto Junction, Limited.

HEAVY portable engines—21 to 50 h. p.; on wheels or skids; for sawmill work; prompt delivery; low prices; send for catalogue. The Robert Bell Engine and Thresher Co., Limited, Seaforth, Ont.

HOISTING ENGINES, derricks, continuous concrete mixers, 250 yards capacity; dump cars, railway construction cars, track-laying tools, boilers, etc. Marsh & Henthorn, Belleville, Ont.

MACHINE TOOLS—I have for immediate delivery a large stock of lathes, planers, shapers, millers, radial and other drills, punches and shears, bolt cutters, hammers, presses, etc., etc.; send for stock list. H. W. Petrie, Toronto.

NEW STATIONARY ENGINES—20 x 24 Watrous sawmill engine; 14 x 18 Watrous sawmill engine; 9 x 10 McEwen engine; 13 x 14 McEwen engine. Watrous, Brantford.

NORTHERN IRON WORKS, Winnipeg—New Barnes lathe, 13-in. swing, 7 ft. bed; in perfect condition, cheap; Porter lathe, 14-in. swing, 6 ft. bed; almost new; bargain; new shaper, 16 x 20, and countershaft; best make; cheap.

NORTHERN IRON WORKS, Winnipeg—Steam plant, consisting of a famous Buckeye high speed automatic 50 h. p. engine, Leonard return tubular boiler 70 h. p., smoke stack and steam pump; a bargain is offered for quick sale. This is a first-class outfit, and our price is away down low.

PATENT, well introduced; big money to live man acquainted with machinery or mechanics. Fred. R. Cole, 138a St. James street, Montreal.

ROCK DRILLS for waterworks excavating, quarries and mines; steam hoists for builders, mines and quarries; simple, compound and triple marine engines, for pleasure launches. The Dominion Rock Drill Co., Napanee, Ont.

SIX horse-power engine and boiler, cheap; three horse gas engine, seen working. 102 St. Lawrence street, Montreal.

THE A. R. WILLIAMS MACHINERY CO., Limited, Toronto, have for sale for prompt shipment the following: Two 10" four side moulders, new; 42" new sand papering machine; new 40" Cowan resaw machine. Send for prices.

THE FAIRBANKS CO.—Temporary warehouse, 124 Bay—standard scales, valves, trucks, letter presses, shafting, hangers, pulleys, belting, mill supplies, machine tools; "Fairbanks" gas and gasoline engines; write for price list.

THE STUART MACHINERY CO., Winnipeg—One 50-light dynamo, direct connection with gasoline engine; 20 electric motors and dynamos, from 3/4 horse power to 1,000 lights; sole agents for McGregor-Gourlay's iron-working and wood-working machinery.

AGENCY WANTED.

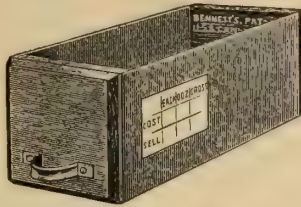
WANTED—To secure agency in Manitoba town for modern gasoline engine; state terms and commission. Box M 14, **HARDWARE AND METAL**, Toronto.

...THE...

Bennett Manufacturing Co.

Bennett's Patent Shelf Box and Cabinets
for Hardware, Grocery, Seed and
Drug Trades, etc.

Owing to
the steady
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new quar-
ters were
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Address all communications to our New Factory:

Pickering, Ontario

OAKEY'S 'WELLINGTON' KNIFE POLISH

The original and only Genuine
Preparation for Cleaning Cut-
lery. 6d. and 1s. Canisters

JOHN OAKEY & SONS, LIMITED

MANUFACTURERS OF

Emery, Black Lead, Emery, Glass and
Flint Cloths and Papers, etc.

Wellington Mills, London, England

Agent:

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MADE IN CANADA



Threshermen, Attention!

The Threshing belt that gives the greatest
satisfaction is the "MAPLE LEAF"

Stitched Cotton Duck Belt

MANUFACTURED ONLY BY THE

DOMINION BELTING COMPANY
HAMILTON, ONTARIO, Limited

Ask your dealer for it and take no other.

Beware of Imitations

Our "MAPLE LEAF" Belt Dressing is the
best on the market—made only by us.

ASK YOUR DEALER
OR
WRITE DIRECT.

I will take off
my hat to

Manganese Anti-Friction Metal

said an engineer the other
day.

Because it is the best
Babbitt made.

Every pound guaranteed.

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Montreal,
New York,
Seattle.



H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
Steel and Twist Barrels
Superior in Design, Workmanship
and Finish, and the most popular
Gun on the Market.

Simplest
"Take Down"
Gun Made



HARRINGTON & RICHARDSON ARMS CO.
Also makers of H. & R. Revolvers.
Catalog on request. Worcester, Mass., U.S.A.

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Tailors' Shears,
Trimmers' Shears,
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ACKNOWLEDGED THE BEST.

R. HEINISCH'S SONS CO.

NEW YORK OFFICE, 155 Chambers St
NEWARK, N.J., U.S.A.



SEYMOUR SHEARS

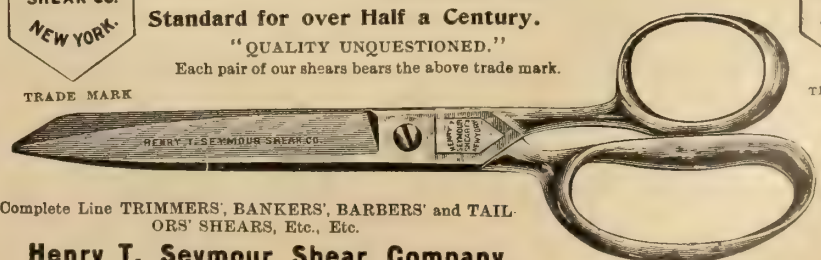
HAVE BEEN THE

Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



Complete Line TRIMMERS', BANKERS', BARBERS' and TAIL-
ORS' SHEARS, Etc., Etc.

Henry T. Seymour Shear Company.

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.



TRADE MARK

Latest Cata-
logue will be
sent in
exchange for
your business
card.

A QUESTION OF LATHE QUALITY.

IN last week's issue "Machinist" raised the question as to what is the best iron-working lathe on the Canadian market, also asking how the Canadian-built lathe would compare with American or other foreign lathes.

To discuss the question fairly many considerations must be taken into account. On the one hand American lathes, on entry into this market, have to pay a duty of 25 per cent., which gives a material advantage to the Canadian machine tool builder. On the other hand, the Canadian manufacturer has a market including about 6,000,000 people, as compared with nearly 80,000,000 supplied by his American competitor. This, by enabling the latter to make a greater variety of designs and to adapt his product to the needs of a greatly diversified field, gives him a distinct advantage over the Canadian.

Which advantage is the greater? And has the Canadian manufacturer made use of the protection afforded him by the duty to bring his quality to a par or superior to the American lathe offering at the same price here?

To give a satisfactory answer to this question Hardware and Metal has sought the opinion of some of the Canadian authorities. It will be seen from the interviews below that there is considerable diversity of opinion.

THE FAIRBANKS CO.

In response to Hardware and Metal's query A. F. Brown, machinery expert of the Fairbanks Co., said, "I consider the Bertram and the Crosby lathes the best manufactured in Canada, while the American Machine Tool Co., and the Lodge & Shipley Co., Cincinnati, build the best American lathes."

"How does the best American engine lathe compare in price and quality with the Canadian?"

"Well, in the States the American lathe has about the same value that the Canadian tool has in Canada and, therefore, the American lathe on the Canadian market is more expensive than the Canadian lathe by the amount of duty. As regards quality, I must acknowledge that the best American lathe is from 30 to 40 per cent. more efficient than the best Canadian. The American lathe is more efficient in that it is more up-to-date, better workmanship being put on it, because the average Canadian is not quite as able as the average American. The best American lathe is built to suit the new high speed steel, and is provided with gearing for the varying of speed, while all Canadian-built lathes still have the speed cone, pulley and belting, and are not suited for the most

economical use of high speed steel. As yet the American lathe is, without doubt, the best on the Canadian market. In time the Canadian builder will be able to compete with the American builder in every particular, but such is not the case at the present time."

"Have you a larger sale of American machine tools than for Canadian?"

"Decidedly so! We have just received a large order from Petrie, Guelph, Ont., and there is not a Canadian tool in the lot asked for. The same was true of orders received from the Canadian Westinghouse Co., Hamilton."

"Does the average small machinist or foundryman purchase Canadian or American lathes?"

"In such cases the price often decides the buyer, and for that reason there are more Canadian than American lathes in operation in the small or the average-sized machine shops and foundries in Canada."

THE LEVY, WESTON & McLEAN MACHINERY CO.

Weston, of the Levy, Weston & McLean Machinery Co., Toronto, was of the opinion that the engine lathe made by some Canadian tool builders was equal in worth to any imported lathe. There is no lathe more efficient for the price than those built by the MacGregor-Gourlay Co., Limited, Galt, or by John Bertram & Sons Co., Limited, Dundas," said Mr. Weston, "Then the London Machine Tool Co., London, Ont., R. MacDougall Co., Limited, Galt, Ont., and G. A. Crosby & Co., of Sarnia, Ontario, all manufacture good engine lathes.

"Of course, the American builder specializes and, therefore, he can turn out special lathes for special work, and there he has the advantage over the Canadian builder, since in Canada it would not pay builders to install special machinery for the manufacture of lathes only, for there is not the demand in this market to warrant such an outlay.

"Yet in ordinary machine shop and foundry practice the Canadian-built lathe finds preference, and the majority of lathes now installed are Canadian.

"Yes," concluded Mr. Weston, "I certainly think that Canadian-built lathes are giving as good satisfaction as American."

A. R. WILLIAMS MACHINERY CO.

A. R. Williams, of the A. R. Williams Machinery Co., Toronto, was satisfied that the best Canadian-built engine lathe was quite as good as the best American product. "Of course," he said in

reply to Hardware and Metal's enquiry, "since the American manufacturers' field is so much larger than the Canadian makers, there are a great many more good American lathes than there are good Canadian ones. But, on the other hand, there are also more second-class American than Canadian lathes. American tool builders have both the American and Canadian markets, while Canadian tool builders have only the Canadian market, which is, compared with the American market, quite small, and therefore American tool builders have a better chance than Canadian tool builders, in that the largeness of their market gives them room to specialize. It is, too, quite evident that a firm who build only lathes should be able to turn out a better tool than a firm who manufacture three or four different tools as Canadian firms do."

In reply to a question regarding the monetary value of Canadian and American lathes, Mr. Williams said that the price ranged according to make of tool, the best American engine lathe being more expensive than the best Canadian engine lathe by the amount of duty.

"Then," suggested Hardware and Metal, "it would pay Canadian machinists and foundrymen to put in Canadian lathes."

"Yes!" said Mr. Williams, "and by far the greater number of engine lathes in use in Canadian machine shops and foundries are of Canadian build."

GEO. B. FRANK.

Editor Hardware and Metal: Regarding the relative merits of Canadian and American made lathes, I regret to state that the machine tools manufactured in Canada to-day are of an inferior class to those made in the United States.

I myself am deeply interested in furthering the manufacturing industries of Canada, and nowhere in the world is there a better field, a market which shows signs of a continual growth, than in the Dominion to-day.

In the first place I cannot find that there is one original design in the line of a machine tool made here. The method is to import a tool as a pattern, providing the demand will warrant the outlay for the particular class of tool imported.

I know of engine lathes made here the centres of which would be from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch out of true. I saw a 72 inch Universal drilling machine the gears of which did not mesh properly, with the result that when the machine was in operation it made a noise not unlike a threshing outfit.

I can cite two cases (not a thousand miles from Toronto either) in two dif-

ferent cities, where milling machines copied after American millers, and made by a reputable firm here, were replaced by the very tools they were patterned after, because of some trifling defects, which could easily have been remedied before the machine left the factory.

Of course I have found some cases where Canadian made tools are giving satisfaction, but they are few and far between, away in the minority.

In talking to a tool manufacturer recently I ventured to ask him why he could not turn out goods with the snap and finish and general get up of his American competitor. His answer was that "the people over here would not pay the price."

It seems rather queer that with a tariff of 25 per cent. and freight in their favor that the Canadian manufacturer is not able to meet competition. I do not intend to enter into a discussion of the tariff here, suffice to say that I regret very much to write as I do in favor of anything foreign. I feel like every Canadian, that I have met in every walk of life, that it is a duty owing to Canada, and Canadians as individuals, to foster and promote the growth of home production. The above facts are as I find them.

GEO. B. FRANK.

AN IRON-WORKER'S OPINION.

Editor Hardware and Metal: In the last issue of Hardware and Metal there appeared in the machinery department a communication from "Machinist," asking "What is the best iron-working lathe offered on the Canadian market?" In connection with this it might be said that there are many good makes of iron-working lathes on the Canadian market to-day, and to differentiate between them, and to say decidedly that one make or one kind of lathe is better than the other, would in all probability be misleading. The varieties of lathes offered to machinists possess distinctive and different features that render them more or less valuable to the user inasmuch as the ideas embodied in the make-up of the machine agree or not with his ideas as to what constitutes good practice. If a machinist likes a lathe with which he is working he will in all probability say it is a good lathe, provided of course that the workmanship and material are in keeping. Let him object, however, to some part and there is no doubt he will say it is not a good machine. In brief, the goodness or poorness of a machine is very often a personal matter with the people directly interested, although it cannot be questioned that there are grades both high and low in the lathe output as well as in any other.

Compared with American lathes, value for value, our Canadian machines are just as good in every respect, both as to style, quality and workmanship. However, it is a fact that there is a more expensive line of American lathe in the Canadian market to-day, than is actually made in this country.

IRON WORKER.

Montreal, May 25, 1904.

METALS, THEIR ORIGIN AND NATURE.

By Geo. B. Frank.



Passing through the golden grain fields of Minnesota and the prairie of the Dakotas, the traveler finds himself nearing

that part of the country so appropriately called "the Land of Sunset." Out in that great expanse of territory known as the Northwest lies the State of Montana, which has become renowned the world over for its vast deposits of mineral wealth.

The metropolis of Montana is Butte. Without doubt Johannesburg is the only other city on the globe of equal interest to the financial world. The life blood of the world's financial operations being gold, to Johannesburg must be given the credit of supplying the most abundant golden stream that has ever flowed from dear old mother earth. It is stated on good authority that the Rand will long continue to produce over \$100,000,000 a year in gold, and that under favorable conditions as much of the precious metal will be found there as in America and Australia combined.

Yet, with all this in favor of the South African city, it seems that Butte, which has enriched the American nation with hoards of gold and silver, dug out of its hills, is of far more importance to the commercial world, because of its wonderful deposits of copper.

Similar to our own Copper Cliff in Ontario, Butte has no visible agricultural land. The slopes of the hills look barren. There is not a shrub, or tree, or flower within a radius of miles. This is caused by the roasting process to which the ore is subjected before it is consigned to the smelter. This roasting process is a simple one. A layer of wood is placed upon the ground, then a layer of ore, and vice versa, until the pile has reached a desired height. The entire mass is set on fire and the sulphur eliminated. The powerful fumes arising and permeating the atmosphere destroy every vestige of vegetation. Such is one of the sacrifices made to the surface of the earth that the secrets garnered in her bosom may be the more eagerly sought for.

In 1898 Butte and her suburb Anaconda produced 250,000,000 lbs. of copper, which, valued at present prices with its gold and silver, would be some \$50,000,000, the number of men employed to dig out this great wealth being 13,784.

There are at present 38 mines in Montana varying in depth from 500 to 2,200 feet.

The following statistics will give an idea to what extent copper is used the world over.

	Tons.
England, imported from the United States and elsewhere.....	113,003
Germany.....	63,572
France.....	36,988

The estimated consumption of copper in the United States per annum is 240,000 tons. The total production by all nations of the world where ore is found, for the year 1902 was 542,470 tons. Of this amount Canada and Newfoundland produced 19,485 tons. The dividends paid by the various companies operating these mines are enormous. The four corporations I am about to mention paid the following dividends from January 1, 1903, to December 1, 1903:

Amalgamated.....	\$3,100,000
Anaconda.....	1,200,000
Boston and Montana.....	1,200,000
Calumet and Hecla.....	2,500,000

The total production of the Calumet and Hecla Mine in the Lake Superior country alone for the first ten months of 1903 was 66,200,000 pounds of refined copper. This gave employment to 13,629 men.

As a metal used for commercial purposes the world over, copper ranks next to iron. Wherever brass is found there copper plays the prominent part. It ranks first among the metals employed in electrical work; is very ductile and can easily be drawn into wire.

The tempering of this metal is one of the lost arts. Known to the ancients it certainly was, as implements and weapons found in the mounds of the western country, made thousands of years ago, proved to be as hard as tempered steel. Many have been the men who have racked their brain in an endeavor to discover this art, but none have been successful.

Of course a time will come when the output of these mines of to-day will be exhausted. Even the mountains and hills surrounding these great hives of industry will in a century or two crumble and disappear, and the quartz lodes and mineral will take less time, and when the last ounce of mineral has been taken out, and the hum and whirr of the smelter has been silenced, these grand monuments of iron and steel reared by the hand of man, will become as desolate as the plain. The glory and wealth of these mines will become a tradition and the greatness of the Copper Kings will be no more, for, after all, "We are such stuff as dreams are made of, and our little life is rounded with a sleep."

ELECTRICAL GOODS AND SUPPLIES

Artistic Lighting.

It is a far cry from the meagre indoor illumination of a generation ago to the brilliant and highly developed state of the art as it exists to-day. The coal oil lamp was the great illuminant at that time, and then no one dreamed

the appearance of indoor decorations. A special study has been made of the requirements for most effective lighting, as well as the proper grouping of lamps. The needs and demands of lovers of the beautiful have been considered. The result has been that there is on the market at the present time a line of goods in electrical fixtures that far surpasses anything before attempted, and which can hardly fail to be a source of admiration. The illustration herewith shown represents one of the many handsome fixtures manufactured by Munderloh & Co., of Montreal.

Gas and Electric Plant in College.

The Mount St. Louis Institute, Montreal, is about to have a complete gas and electric generating plant for lighting and ventilating the entire institution. The gas generators have already been installed, the product of which is to be used to supply a gas engine. This is to be the motive power for the 25 k.w. Westinghouse generator that is being put in. Additional wings are being added to the already large building and the whole renovated throughout.

An additional novel feature in connection with their recent improvements is a specially fitted up academic hall, which is being lavishly decorated and profusely illuminated. It is being supplied with a complete theatre switch-board, with dimmers, rheostats, etc., to produce any desired scenic effect. This is said to be the first time that such a feature has been adopted by an educational institution in Canada.

The wiring of the building is to be in an enclosed steel conduit, and the fixtures and accessories are to be of the latest pattern, and thoroughly up-to-date. When completed the interior electric decoration of the college will present a beautiful and attractive appearance.

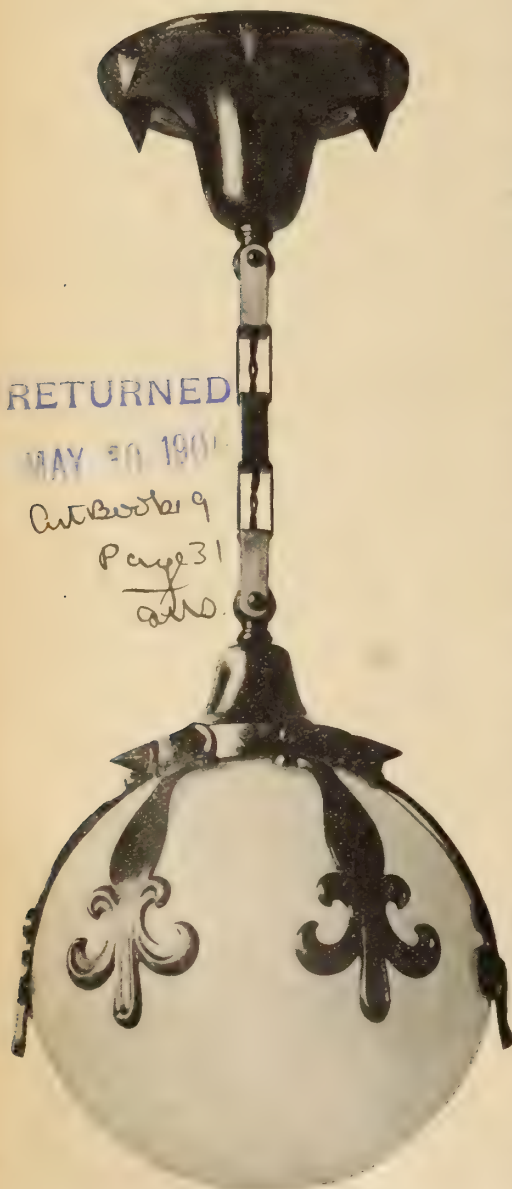
The authorities claim that they can generate the gas to run a gas engine for the electric lighting plant and deliver the current to the lamps at a very much cheaper rate than it is supplied by the local companies, and hence the novel installation.

Will the Apparatus be Replaced?

Fire at the home of Dr. Thos. R. Eldridge, Philadelphia, destroyed electrical apparatus which was being devoted to an unusual purpose. Dr. Eldridge had for some months been making a series of experiments, the aim of which has been the transforming of negroes into whites. Dr. Eldridge was doing the bleaching by throwing an X-ray light through radium, thus destroying the coloring pigment of the skin. Several negroes who had undergone treatment are now partly white, says the Electrical World. With the destruction of the electrical appliances the work of completing the transformation is halted. The patients are, therefore, left in a state of what might be termed dermatological suspense. It will be several months before duplicate apparatus can be built. Meantime, Dr. Eldridge does not know what will become of the blacks. He does not think that the whitened parts of the skin will become black. All he knows just now is that there are a half dozen unhappy negroes in Philadelphia.

Marconi Stations.

THE Canadian Marconi Co. have signed a contract to build seven stations in the Gulf of St. Lawrence and on the Atlantic seaboard. The first stations to be constructed are four in number, and are to be located as follows: Fame Point, Heath Point, Point Amour and Belle Isle. The first is on the Gaspé coast, Heath Point is on Anticosti Island, Point Amour is on the Labrador coast, and the Belle Isle station will be located on Belle Isle island. The stations mentioned will control the northern passage, being all within easy distance of any vessel taking the route north of Newfoundland either in or out of the gulf. These four stations are to be erected during June, July and August of this year, and it is expected that they will all be complete and in working order by the time mentioned, if not sooner. Much of the material is already manufactured, but there are houses to erect for the operators, poles for the carrying of the currents to be placed in position, etc.



of the possibility of electric lighting, with the multiplicity of uses to which it is put. For several years particular attention has been paid by manufacturers on all sides to the development of the artistic side of lighting, to add to

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also

LET THE PUBLIC KNOW.

ELECTRICAL fixtures and electrical goods should sell easily in a hardware store for it is the natural place in which to look for such goods. Only by an accident and by lack of aggressive action has this trade been denied most hardware stores. But although electrical goods should sell easily they will not sell themselves. It is indeed doubtful whether any line of goods can be sold successfully and profitably without the intelligent and systematic pushing of the salesmen and store management.

Hence the hardware merchant who decides to stock electrical goods must devote to the development of his new department all the energy and push at his command. He must start right by taking the public into his confidence and letting them know what he is doing. The fact remains that, whereas there is no reason why the hardware store should not get this trade, in many towns the public are not accustomed to look to it for these goods. They must be educated to do so, and hence at the outset it is necessary to advertise widely the fact that a new department has been added to the store. Let every probable customer know that he can buy his electrical fixtures from John Blank, the hardware man.

The man whose whole attention is centred upon his own store, to the development of which he is giving his best thought, is too apt to imagine that the public know without being told of all his new departments. But the public are not mind readers, and they have other interests. Moreover, their memories are short and they require to be reminded constantly of what is being done in the hardware store. They will not know that an additional department has been added to John Blank's hardware store unless they are told of it, and they will soon forget about it unless John Blank persistently directs their

attention to it. The new department must be advertised.

It has been remarked by some one that trying to do business without advertising, without taking the public into your confidence and letting them see and hear what you are doing, is like winking at a girl in the dark. You know what you are doing, but no person else does.

Therefore, let in the light of publicity on the electrical department of the store. Make a big announcement in the local papers and follow it up by regular advertising. Carry as large an assortment as possible, and display it to the best advantage. Let electrical goods have the right of way in the window displays for a few weeks, and do everything possible to impress the buying public with the importance of the new department. Persistent effort is bound to bring good results, for there is a big field to be developed.

Electrical Novelties.

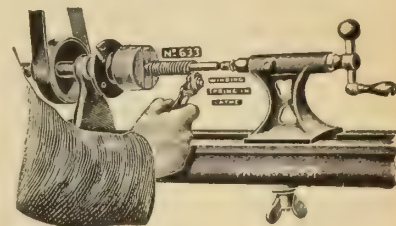
John Forman, Montreal, is now handling "Ever Ready Electric Lights," manufactured by the American Electrical Novelty and Mfg. Co. A neat catalogue describing these novelties is to hand. It is full of illustrations, describing the many uses to which these miniature lamps are put.

GAVE A WRONG ADDRESS.

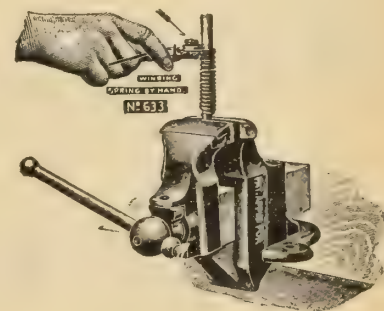
An article published in a recent issue stated that Ross & Matthews, of Dundas, Ont., were adding tinsmithing to their business. The address given was a wrong one, as Ross & Matthews conduct a general hardware, paint, seed and tinsmithing business in Cannington, Ont.

AUTOMATIC SPRING WINDER.

THE Smith & Hemenway Co. of No. 296 Broadway, New York, have undertaken the entire marketing of the automatic spring winder made by the Best Tool Co. of Boston, Mass. The method of using it is shown in the accompanying illustration, also its adaptability for hand and power work, with mandrel in vise or lathe. This spring



winder is made in two sizes, No. 633 5 inches long, and No. 634 9 1-2 inches long. The former is being made to manipulate wire in Brown and Sharp gauges, Nos. 36 to 12 inclusive, and the latter No. 634 wires in gauge 24 to 3 inclusive. The tension and spac-



ing plates are of Coe bronze, with malleable iron handles. Special springs can be easily improvised by the automatic spring winder if wires and proper mandrels are at hand. Applications for catalogues and price lists relative to the winder will have the prompt attention of the Smith & Hemenway Co.

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Electrical Supplies of all kinds.

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Leonard Refrigerators.

Model Oil Stoves and Ovens.

Boss Gasoline Stoves.

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promptly. Write for printed matter.



The Model.

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HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN,
Montreal.

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AN ACTIVE FALL TRADE.

BUSINESS men, not only in hardware and metal lines, but in practically all lines, are looking forward to Fall business with keen anticipations of an activity which will in large measure make up for the comparatively poor Spring trade.

It is a fact that at the moment business is in particularly good condition, at least so far as manufacturers and wholesale houses are concerned. Yet the backward Spring, which retarded building operations and kept farmers away from the stores, so reduced the volume of trade in February, March and April that it is hardly probable that the activity of May and June will make up for what was then lost.

To the Fall, then, merchants and manufacturers look forward with great interest. It is, consequently, decidedly gratifying to note the widespread feeling of confidence regarding the prospective Fall trade.

Possibly the most promising feature of the situation is the briskness of

building operations. In British Columbia mining activity and the development of farming districts of the Fraser Valley have combined with the increase of population in the cities to create a need for buildings of all kinds in that province. The continuance of the heavy flow of immigration into the Northwest and Manitoba, and the rapid development of Winnipeg as a commercial centre have resulted in building operations from "the great lakes to the Rockies" at an unprecedented rate. In Ontario and Quebec the extension of manufacturing plants and the increase of their staffs has caused a general shortage of houses, felt most keenly in the larger cities, yet manifest even in the towns and villages. In Western Ontario every town seems to be boasting of a building boom.

In consequence of this there is every reason to expect a continuance of the heavy lumbering trade that has contributed so largely to the prosperity of the northern counties of Ontario and Quebec, while contractors, builders, supply men of all kinds, are bound to share in the prosperity caused by much building. The hardware trade is particularly influenced by such extensive operations.

In the Maritime Provinces the outlook, while not so roseate as in the western section of the Dominion, is by no means unsatisfactory. True, business has been curtailed by the unfavorable weather, yet there is general prosperity in these provinces, and the indications point to a steady improvement.

Another factor which must be taken into consideration as likely to add materially to the business of the country during the Fall is railway construction. The passage of the Grand Trunk Pacific Bill by the Dominion Parliament is now assured. The early commencement of operations along this great line, not to mention the lines to be built by the C. P. R., by Mackenzie & Mann, by the Temiskaming Commission, and the score or more smaller lines in every province, will provide work for thousands and will otherwise create needs which must be supplied, generally speaking, by Canadian products.

Everything considered, there is reason for confidence in the Fall trade of 1904.

MONTREAL CITY CHARTER.

WHEN Rudyard Kipling wrote his now famous poem, "Daughter am I in my mother's house, but mistress in my own," the reference was to the connection between Canada and the Old Country. The principle expounded in these words may be applied with equal force to the connection which should, but does not, exist between Montreal and the Province of Quebec. There are many little matters, such as the abolition of trading stamps, which Montreal should have full authority to deal with herself, without being compelled to go to Quebec.

At present Montreal is constantly in the position of having to apply to the Local Legislature for amendments to the city charter. As many private interests stand behind these proposed amendments, frequently measures antagonistic to the general welfare of the city have been hurried through. At last year's session of Parliament much legislation inimical to Montreal business men was passed, and the same thing is being repeated this year. A long string of amendments have been before the House, some of which aim at setting aside some important features of the revised city charter, which was created by the Reform element of the City Council. The intention of the new charter was to give Montreal power to control its own affairs, and it certainly rests with the Parent Government to reject any measure that is brought in with a view to tying the hands of the city.

LOWER PIG IRON PRICES.

One depressing note is heard in the market reports this week. The consumption of pig iron in the United States has been seriously curtailed with a consequent overproduction. The result has been that for the last two or three weeks prices have been unsteady, culminating this week in a reduction at Pittsburg of 50c per ton, with the probability of still lower quotations.

The Canadian market is so sensitive to fluctuations in the United States that this reduction in pig iron is bound to have a somewhat depressing effect on the situation here. At the moment prices are nominally unchanged, but it is not unlikely that further concessions will be made.

CANADA'S UNDERPAID JUDICIARY.

THE many readers of this paper who have followed the articles in *Hardware and Metal* advocating higher salaries for the Supreme Court judges, will find sound logic in the following from the *Ottawa Citizen*:

"The article which we reprint in another place in this issue from *Hardware and Metal* on the subject of judicial salaries in Canada, has our hearty endorsement. It shows a healthy state of national sentiment when the rights of one class in the community are fearlessly advocated by the press of another class in the interest of all. It is advocacy of the most telling kind. That the salaries of judges in this country are so inadequate as to be on the mean side is obvious to any one who takes the slightest trouble to look into the matter. In the past we have been able to secure able and upright men to fill our judicial offices notwithstanding the meagre remuneration attached to them, but in view of the rapidly increasing cost of living throughout the Dominion have we any right to expect a continuation of our good fortune in this respect? In the senate, in September, 1891, the late Senator Dickie called the attention of the Government of the day to the question in hand. In the course of his remarks he said:

"I have no personal interest in the matter beyond that which attaches to any member of this House who is interested in having an efficient administration of justice. This end will not be attained unless by an adequate and independent judiciary. The scale of salaries attached to these high offices was arranged shortly after confederation. During that period, which has been the life of the nation to which we belong, we have seen throughout very large increases, beginning with the indemnity of members of parliament, and increases in salaries of ministers, and increases in the salaries of almost every public officer down to the bottom and yet the salaries of the judges have remained stationary."

"What Senator Dickie said then with so much force gains additional strength when quoted after thirteen years of in-

action in the matter. It is not becoming to the dignity of Canada that it should be said of her that her judiciary is the poorest paid of any in the chief British possessions. It is the smallest sort of cant for us to laud the probity of our judges on the one hand, and to deny them salaries commensurate with their work and dignity on the other. It is an old saying that a well-paid bench makes justice cheap. An unsound judge is dear at any price; and it is no answer to say that he can be put right on appeal. That means additional expense and delay to the well-to-do suitor; to the poor man it means in the majority of instances enforced acquiescence in a denial of justice. The better the judges the fewer the appeals. By all means, then, let us make it possible for our best lawyers to go on the bench without facing one of the hardest of all trials,—poverty in high position."

The *Citizen* touches the vital point of the whole case. Canadians are proud of their judicial system, we never cease praising the probity and strength of our judges, yet though the wages of every class in the community have been advanced we continue our Supreme Court judges at salaries which were too small at confederation, but are now absolutely niggardly. It is our boast that only safe, strong, conservative men are sought for judicial honors, yet the salary attached to the highest judicial position a Canadian lawyer can be invited to take is such that to take it a first-class lawyer must make a financial sacrifice which none should be expected to make, and which few can afford to.

A SERIOUS IMPERFECTION.

MAYORS and city councils are time and again accused of laxity in the discharge of their duties and indifference to the interests of their respective municipalities. These charges are usually so well founded that the public has come to look on municipal councils as pretty poor business concerns. Oftentimes they advise their councils to imitate the boards of trade

and follow the footsteps of such progressive institutions as the Manufacturers' Association.

Mayor Urquhart of Toronto has reversed all this. He has given an example of progressiveness that is truly welcome in this age of degenerate municipal officials, and he has not only shown his own value, but has brought both the Toronto Board of Trade and the Toronto branch of the Canadian Manufacturers' Association into an unenviable light.

A short time ago Mayor Urquhart informed the secretary of the Toronto branch of the Manufacturers' Association and Mr. J. F. Ellis, president of the Toronto Board of Trade, that a Mexican trade commissioner would shortly be in Ottawa to negotiate with the Dominion Government for Atlantic and Pacific steamship services between Mexico and Canada. Mayor Urquhart suggested that the commissioner be invited to Toronto. Receiving no response, he offered to extend the city's hospitality to the commissioner. Then he was calmly informed that the manufacturers were too busy to consider the question.

This incident certainly reflects on the manufacturers. Doubtless they are busy, but it does not follow that their organization should thereby be incapacitated from dealing with such a proposition. The same thing is true of the Board of Trade.

We do not wish to minimize the worth of either organization or the ability of their respective secretaries, but it seems to us that the day has come when the work of both bodies should be placed on a higher plane. The day of the clerical secretary is over. Modern conditions demand an experienced executive head, who shall be unhampered by technicalities and shall have a close grasp of the great trade questions of the day.

Surely the time has come when such an organization as the Manufacturers' Association and the leading boards of trade, representing tens of millions of capital, should have their interests placed in the hands of as highly paid officials as the manager of any great banking institution with only a tithe of the capital. A \$20,000 a year aggressive secretary or manager for the Montreal, Toronto or Winnipeg Boards of Trade could inaugurate broad plans for the development of local and Canadian trade that would make him worth his salary many times over.

THE HERITAGE OF CANADIAN CITIES.

IN the address delivered by G. B. Ryan, the new president of the Guelph Board of Trade, some thoughts are given expression that should be seriously considered by the business men in many Canadian towns. It is the fact that in many towns the residents, to use Mr. Ryan's phrase, "let the moss grow on their feet." This lack of energy and aggressiveness is detrimental to the interests of every class in the community, but to none in equal degree as to the merchants. Their business is ever the first to respond to life and activity, or to dullness and inactivity. Even the farmers prefer to trade in a town which has the air of industry and progress than in one where there is the "quiet ease of men content with what they have." Mr. Ryan's address was in part as follows:

"I look upon the Board of Trade of any city in point of importance as a very close second to the City Council; it is generally composed of the cream of the business men, a body of men who are responsible to a great extent for the success or failure of the place.

"The City of Guelph possibly never displayed more real life than at the present time. Evidences of prosperity are to be seen everywhere, but the place we will hold among the cities of Canada ten years hence will very much depend upon the class of business men who will handle her business affairs between now and then. If they are live, up-to-date, progressive, and at the same time cautious, we will hold a very important place among the Canadian cities.

"I have great faith in this country of ours; there is without doubt a great future before her. Canada is now on the up-grade as never before; she is going ahead with leaps and bounds, at a pace little dreamed of by the most sanguine of us a few years ago. We have only within the last few years become conscious of our strength. People from different parts of the world are just finding out our rich resources, and are fast pouring into our country. I think I am safe in saying that no other country in the world is prospering in proportion to her population as we are to-day. Only a few years ago, as you know, thousands of our young men were leaving Canada every year for the United States. Five years ago we succeeded in inducing 712 of our American cousins to make their homes in Canada; last

year no less than 49,000 cast in their lot with us, mostly going to our northwest. Three years ago only 42,500 from all parts of the world located in the Dominion; last year 128,900 came to Canada, and it is estimated that in the last five years from the United States alone settlers' effects to the value of \$19,000,000 and \$25,000,000 in cash came into this country, and from present indications this year will far outstrip the last. I hardly think the most optimistic of us realize what the growth of this country will be in the next few years. When you remember that in the last eight years our railway earnings, the total amount in our banks, and the revenue of the Government have doubled, may we not ask ourselves what this development may be in the next ten



G. B. Ryan, President of the Guelph Board of Trade.

years? Has it dawned on us what this great prosperity may mean to Guelph? This part of Canada, for at least many years to come, will be the great machine shop for the northwest. As hundreds of thousands of people locate there, our present factories will have to be enlarged and re-enlarged and many more built, and one of the great questions for Guelph to settle is: Are we going to get our share of this great prosperity, or will we stand idly by, with our arms comfortably folded; while the trade drifts to other places? This certainly is one of the questions the Board of Trade should keep well to the front.

"There are two ways this city can be made grow, first, by the enlarging of

our present factories and establishing others, and every reasonable inducement should be offered manufacturers to locate here, such as free sites, fixed rate of assessment for a time, and possibly we might go as far as to make loans where well secured, but I am almost persuaded that the day for bonus giving has gone by. Second, by making it very easy for people to come from a greater distance than they do now to do their business in Guelph. This can be done by tapping the outlying districts with electric roads. Fifteen years from to-day electric roads will be running in many places little thought of by us now. Will they come our way, will they be bringing business into Guelph, or will we find ourselves sidetracked, and the territory that naturally belongs to Guelph cut off by roads carrying trade to other places? This certainly will very much depend upon whether the men that are handling the business affairs of Guelph are to be broad gauge or narrow gauge men. If they are to be the latter, men who cannot see past 'the now,' men who never make a move until they see a dead sure thing, men who lay no plans for the future, men who are prepared to mount every progressive train that may leave the city and screw on the brakes for all they are worth, then we may expect, when people of other cities are walking on their paved streets, to find the mud still sticking to our shoes. I would much prefer taking my chances in a poorly situated town or city in the hands of good live business men, than in a well situated place controlled by men who allowed the moss to grow on their boots; to a very large extent it's the men that make the place. If we expect strangers to come to our city we must let them know we have something special to offer, we must make our front door swing open easily, we must be prepared to offer all that any other city of our size can offer for at least the same money, or, if possible, more for the same. Our city must be well spoken of, it must be known as a clean, healthy and pretty place, our educational system must be the very best, and at the same time our taxes must be in proportion to what we have to offer."

In conclusion, Mr. Ryan said it was a great pleasure to be able to report that Guelph manufacturers were in such a flourishing condition at the present time that many of them had found it necessary to enlarge their present buildings in order to keep pace with the increased business offering, and as well that other factories are being built.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, May 27, 1904.

DURING the present week, Victoria Day coming in, with a suspension of business for the day, has meant a slight difference in the hardware line, as it is bound to do in all trades. The result is that with an active business doing, dealers are greatly rushed to keep up with orders, that they may have goods shipped promptly. Business is still brisk in nearly all lines, and the wholesale men are getting a good share of the general increase in trade, and which they are in good position to meet. Import orders have been arriving steadily by the incoming boats, so that stocks are being well kept up. Tramp schooners are now running, thus facilitating shipping and opening up another avenue for the distribution of goods. A large quantity of hardware is being shipped by rail and this week one firm sent out twelve carloads at one time, to go to different points.

Prices continue steady, and but one change is noted this week, namely, a reduction of 10c a cwt. on roofing pitch. While there is no actual shortage in barb wire, which is in big demand, it is hard to get in large quantities. Large shipments of cement and firebrick have arrived, so that there is a good supply on hand. No shortage is reported in wire nails this week. Collections are very fair and a large number of enquiries are coming in.

Washing Machines—Demand still keeps up. We quote as follows: Round (three legs), \$35.00 per dozen; round (four legs), \$39.00 per dozen; square (regular size), \$42.00 per dozen; square (smaller size), \$36.00 per dozen; round rotary, \$56.00 per dozen; square rotary, \$59.00 per dozen; "New Century," \$72.00 per dozen.

Lawn Mowers—A further big business is reported this week, as might well be expected this weather. We quote as follows: With 8-inch wheel, sizes 12, 14 and 16 inch, \$2.65 each; with 9-inch wheel, size 12, \$3; size 14, \$3.12 1-2; size 16, \$3.25 each; Philadelphia pattern, size 12, \$3.25, size 14, \$3.50; size 16, \$3.75 each; High Wheel, size 12, \$4; 14, \$4.25; 16, \$4.50; 18 \$4.75; 20, \$5.25 each.

Garden Hose—The warm spell has had its effect on this line, and a big demand is the result. Discounts continue: Trade 75 per cent.; Western, 65 and 10 per cent.; White, 40 and 10 per cent.; Maroon, 40 and 10 per cent.; cotton, 60 per cent.

Hose Reels—A lively market is reported, keeping pace with the demand for garden hose. Prices 15 to 25 per cent. higher than last year.

Lawn Sprinklers—These are in great demand. Prices as before, \$2.50 to \$18 a dozen.

Ice Cream Freezers—The approaching Summer has created a big demand, and a big business is being done. We quote the following range of prices for the leading brands: One quart, \$1.50 to \$1.60 each; 2 quart, \$1.70 to \$1.80 each; 3 quart, \$1.95 to \$2.25 each; 4 quart, \$2.35 to \$2.60 each; 6 quart, \$2.95 to \$3.25 each; 8 quart, \$3.70 to \$4.10 each; 10 quart, \$4.75 to \$5.50 each; 12 quart, \$5.75 to \$6.50 each; 14 quart, \$6.75 to \$7.50 each.

Agricultural Wrenches—There is not much change in the demand, which continues steady. Discount as before, 25 per cent.

Harvest Tools—Trade continues the same. Discount as before, 60 per cent.

Spring Hinges—A good business is being done. We quote as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—There is an active demand in this line. Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs; the price of the 6, 8 and 10-inch sizes is \$4.25.

Wire Hat and Coat Hooks—A steady trade, with price as before, for 3-inch hooks 75c a gross.

Churns—A sluggish market is reported. Discounts as before, 40 and 15 per cent. f. o. b. Montreal and 30 and 30 per cent. f. o. b. factory.

Green Wire Cloth—A brisk demand for wire cloth this week and a big trade is being done. The price is \$1.50 per 100 square feet.

Poultry Netting—Trade continues active and many orders are reported. Discounts for 2-inch 19-gauge standard extras are 60 and 5; for 2-inch 16-gauge, the discounts are 55 and 5 per cent.

Galvanized Poultry Netting Staples—There is a steady business being done. Prices are: Sizes 5-8, 3-4, 1 1-8, 10-lb. boxes, \$12.50 list; 25 and 50-lb boxes, \$12.25 list; 100-lb boxes, \$12 list. Less 57 1-2 per cent.

Bed Staples—Prices continue as before. The discount on the Montreal Rolling Mills Company's and the B. Greening Wire Company's lists is 57 1-2 per cent. The discounts on the Dominion Wire Company's list are 25 and 21-2 per cent.

Blind Staples—No change is noted. Discount as before, 40 per cent.

Galvanized Coil Spring Wire—There is a fair business being done. Our quotations are as follows: Nos. 6, 7 and 8, \$3.20; No. 9, \$2.70; No. 10, \$3.30; No. 11, \$3.35; No. 12, \$2.95; No. 13, \$3.10. Carlots 5 cents less. Freight prepaid is less than carlots to extent of 25 cents and in carlots to the extent of 20c.

Galvanized Wire—Trade continues fairly active. We quote as follows: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11 \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots 12 1-2c extra per 100 lbs will be charged.

Barb Wire—There is an unusually big demand in barb wire at the present time, and although there is no actual shortage, large shipments are hard to get. We quote: \$2.75 per 100 lbs. f. o. b. Montreal, and \$2.50 f. o. b. Cleveland. Carlots of 15 tons \$2.40 f. o. b. Cleveland.

Smooth Steel Wire—No new feature in the market this week. We quote: Bright and annealed, \$2.50 per 100 lb. f.o.b. Montreal, Toronto, Halifax, London, Hamilton and St. John. Net extras per 100 lb are now as follows: Coppered wire, 60c; tinned wire, \$2; oiling, 10c; spring wire, \$1.25; best steel wire, 75c; bright soft-drawn, 15c; hay-baling wire, 20 to 25c.

Annealed Hay Wire—There is not much doing in this line. No change in price. Same list, with usual discounts.

Fine Steel Wire—Small trade is reported. Discounts 25 per cent., with net extras as follows: 1 and 2-lb. hanks, 25c per 100-lbs.; 1-2-lb. hanks, 37 1-2c; 1-4-lb. hanks, 50c.

Brass Wire—Demand is not very great. Discount as before, 60 per cent.

Copper Wire—A fair trade is reported. Discount 60 per cent.

Rivets and Burrs—There is an active market and fairly good demand. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Tinned Roofing Caps—This line is moving well. Price is 6c a lb.

Screws—There is still a shortage in screws, as the manufacturers have been unable to catch up with the demand. An

active trade is being done. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—There is a good business being done. We quote discounts as follows: Carriage bolts common, (\$1) list 3-16 and 1-4 diameter, 60 per cent.; carriage bolts, common (\$1) list, 5-16 and 3-8 diameter, 55 and 5 per cent.; carriage bolts, common (\$1) list, 7-16 diameter and up, 55 per cent.; carriage bolts, full square (\$2.40) list, 60 per cent.; carriage bolts, Norway iron (\$3) list, 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 per cent.; coach screws, cone point, 70 per cent.; nuts, square, all sizes 4c per lb off; nuts, hexagon, all sizes, 4 1-4c per lb off.

Washers, 45 per cent. off.

Cut Nails—A good demand this week, with no change in prices. We quote as before, \$2.30 per keg, f. o. b. Montreal, Hamilton, Toronto and St. John.

Wire Nails—There is a big trade being done and the manufacturers have caught up with the demand. We quote the following prices: \$2.40 per keg carlots and \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Boxwood Rules—There is no change. Discounts as before, 52 1-2 to 50 per cent. off list.

Shot Guns—Shot guns are in fair demand. There is still a shortage in some numbers of single barreled.

Cordage—The demand in this line is very good. We quote as follows: Pure manila, 15c; British pure manila, 12 1-2c; sisal, 12c; double lath yarn, 11c; single lath yarn, 10 1-2c; Russian tarred spun yarn, 13 1-2c; jute rope, 3-8-in in diameter and upwards, 9c; cotton rope, 2 1-2c; cotton twine, 24c for 3 and 4 ply. Cotton bedcord, 90c to \$1.70, according to length. Sash cord 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Roofing Pitch—A brisk trade. There is a decrease of 10c per cwt. reported this week. The price is now \$1 per cwt.

Building Paper—The trade is very brisk. We quote as follows: Tarred felt, \$1.85 per 100 lbs; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Firebricks—Large consignments have recently arrived. English are selling at \$16 to \$22 per 1,000, Scotch \$17 to \$22.

Cement—There is a big demand, but the supply is ample, as incoming steamers have brought in large quantities.

Prices remain unchanged at former quotations, which are: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex-cars.

PLUMBING GOODS.

Trade continues active in all lines of plumbing goods, and the supply houses apparently have all that they can attend to. Nominally prices are unchanged. Iron pipe is selling freely, but for good orders prices quoted below are not always maintained. The discount of 70 per cent. on nipples (1-2 inch to 6 inch) noted last week was announced by the manufacturers, but some of the supply houses state that their discount is, as before, 67 1-2 per cent. The city trade in plumbing supplies is active, in spite of the strike.

Lead Pipe—Business continues active, some large shipments having been made this week by boat. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent., f. o. b., Montreal, Toronto, St. John, N.B., and Halifax; f. o. b. London, 15c per 100 lbs. extra; f. o. b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—There is a steady trade in this line of plumbing supplies, and the market is stronger and in more healthy condition now than it was some weeks ago. We again quote discounts as follows: Light soil pipe, 3 to 6 in. 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6-in. 60 per cent.; extra heavy soil pipe, 8-in, 45 per cent. Light fittings, 2 to 6-in, 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6-in, 60 and 5 per cent.; extra heavy fittings 8-in, 45 per cent.

Iron Pipe and Fittings—Business continues active in iron pipe. For desirable orders for large quantities the prices below quoted might be shaded a little. As noted above, the increased discount on the larger size of nipples, noted in last issue, was announced by the manufacturers. Some of the supply houses state that they are still allowing the former discount of 67 1-2 per cent. We quote: Standard pipe, per 100 feet, in length under 19 feet—black, 1-8-in, \$2.30; 1-4-in, \$2.30; 3-8-in, \$2.55; 1-2-in, \$2.85; 3-4-in, \$3.65; 1-in, \$5.20; 1 1-4-in, \$7.35; 1 1-2-in, \$8.95; 2-in, \$12.55. Galvanized—1-4-in, \$3.20; 3-8-in, \$3.45; 1-2-in, \$3.90; 3-4-in, \$5; 1-in, \$7.20; 1 1-4-in, \$10.05; 1 1-2-in, \$12.20; 2-in, \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends, are quoted per 100 feet as follows: Black, 1-2-in, \$4.20; 3-4-in, \$5.25; 1-in, \$7.55; 1 1-4-in, \$10.55; 1 1-2-in, \$12.75; 2-in, \$17.60. Galvanized—1-2-in, \$5.25; 3-4-in, \$6.65; 1-in, \$9.55; 1 1-4-in, \$13.25; 1 1-2-in, \$16; 2-in, \$21.90. The discount on all sizes of extra heavy pipe is 12-12 per cent. Coupling, 1-2 in. to 2 in., 55 per cent.

discount; nipples, 1-4 and 3-8 in., 65 per cent discount and 1-2 in. to 6 in. 70 per cent. discount.

Solder—We quote 18c for bar and 18 1-2c for wire solder.

METALS.

In the pig iron and steel markets business is very quiet this week. The outlook for the Canadian market would be sufficiently bright if it were not for the fear of a decline in the United States market. Advices from the United States tell of an exceedingly dull market, and the effect is not reassuring in Canada. Buyers are inclined to wait the course of the market. Price changes in general metals are not numerous this week. Sheet zinc is advancing because of the small supplies on the local market. For small quantities the price now ranges from \$6.75 to \$7. Tinplates, Canada plates, black sheets, etc., are very firm. Tin and copper are firmly held at present quotations, no change having been made. Lead is slightly easier, with local prices unchanged.

Business this week in general lines has been active, but it is not expected that the increased activity this month will be sufficient to compensate for the dull trade earlier in the season.

Pig Iron—As noted above, buying at present is strictly restricted to current requirements, as the foundries seem to expect lower prices and the furnace men and importers are not disposed to make concessions. The dull United States market is adversely affecting Canadian business by causing a distrust in the future stability of the market. The Dominion Iron and Steel Company advised us last week from Sydney (too late for publication) as follows: "The market for the past week has been on the dull side. Some of the small eastern furnaces appear to be very anxious for orders. However, on the whole, prices are being fairly well maintained. The volume of new orders received during the past week has been small; however, customers are still urging delivery of contracts made." In their report this week this company state: "The past week in pig iron business has been very dull. However, some of the largest customers have placed orders for fair sized quantities, they evidently believing that prices will not go lower." We quote:

"Disc," No. 1.....	\$17.50 delivered Montreal.
"Dom.," No. 1.....	13.50
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50
" No. 3.....	16.50
" No. 4.....	16.00
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50
Glengarnock.....	20.00
Gartsherrie.....	19.25
Carnbroe.....	18.50
Carron No. 1.....	19.00
" (special).....	17.50
Ayresome No. 1.....	17.50
" No. 3.....	16.90
Clarence No. 1.....	16.25
" No. 3.....	16.00

Bar Iron—Local prices are steady, and in spite of the weakness in United States

markets are not expected to decline as they have been abnormally low for this market. Moreover, supplies in some sizes are reported to be none too readily obtainable. We quote: Merchants' bar, \$1.75; horse shoe iron, \$2; forged iron, \$1.95.

Merchant Steel—Locally business is quiet. Prices continue as before. We quote: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.55; machinery (iron finish), \$2.45; square harrow, \$2.45.

Tool Steel—Trade is quiet. We quote: Black Diamond, 8c to 9c; Sanderson's, 8 to 9c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c.

Steel Billets—The Dominion Iron and Steel Company advise us as follows: "No orders of any importance have been booked for billets; customers are specifying freely on account of existing contracts. Buyers and sellers seem to be far apart at present, and it is difficult to name a price on billets.

Black Sheets—Prices are being well maintained in sympathy with the increasing strength of primary markets. We quote: 28-gauge, \$2.35; 26-gauge, \$2.30; 22 to 24-gauge, \$2.25; 19 to 20-gauge \$2.20; 8 to 10-gauge, \$2.35.

Galvanized Iron—There is an active business this week in galvanized iron. We quote: 28-gauge, Queen's Head, \$4.30; Gorbals "Best Best," \$4.30; Apollo, 10 3-4 oz., \$4.30; Fleur-de-Lis, \$4; Comet, \$4; Bell brand, \$4. In less than case lots 25c extra.

Canada Plates—Import business is opening up well. Prices quoted are well maintained. We quote: 52s \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Sheet Zinc—Prices have been advanced again. The average price for cask lots is about \$6.50 and for smaller quantities the price ranges from \$6.75 to \$7. Supplies are short.

Zinc Spelter—Quoted at 6c.

Tinplates—Import prices are very firm. Cokes \$3.75 and charcoals \$4.

Terne Plates—We quote \$6.75.

Ingot Tin—The market is firm and steady. Former quotations still obtain, viz., 31 1-2 to 32c.

Ingot Copper—The market continues to show considerable strength, but local quotations are unchanged. We again quote 14c per lb. for quantities.

Pig Lead—Conditions are much the same as last week. The market is not very strong, but no changes have been made. We quote \$3.35 to \$3.45.

Antimony—Cookson's is quoted at 7 3-4c to 8c.

Coil Chain—Quotations are: No. 6c, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4-in., \$6.10; 5-16-in., \$4.70; 3-8-in., \$4; 7-16-in., \$3.80; 1-2-in., \$3.70; 9-16-in., \$3.55; 5-8-in., \$3.35; 3-4-in., \$3.30; 7-8-in., \$3.25; and

1-in., \$3.20 with 10c allowance on carlots.

Scrap Metals and Old Materials—We quote: Heavy copper and wire, 11 to 11 1-2c per lb; light copper, 10 1-2c; heavy red brass, 10 to 10 1-4c; heavy yellow brass, 8 1-2c; light brass, 5 1-2c; lead, 2 3-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10 to \$12; machinery scrap, \$15 to \$16; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs; old rubbers, 5 1-2 to 6c per lb.

HIDES.

The demand has been good for hides, with no quotable change in prices. We quote:

No. 1 beef hides.....	0 08 0 08 1/2
No. 2 ".....	0 07 0 07 1/2
No. 3 ".....	0 06 0 06 1/2
Lambskins.....	0 75
No. 1 calfskins.....	0 11

ONTARIO MARKETS.

Office of **HARDWARE AND METAL**,
10 Front Street, East.
Toronto, May 27, 1904.

BUSINESS continues excellent in all seasonable lines. Retailers are doing an active trade, and while they are, generally speaking, only buying as their requirements demand, the aggregate volume of business is large, a particularly good trade being done in such lines as hose, forks and rakes, fence wire and poultry netting, screen doors and netting, wire nails, lawn mowers, garden hose, etc. Prices are steady throughout. In fact, such a stability is manifest in the market that in practically all lines retailers do not hesitate to buy if they feel they can handle the goods. The demand, not the price, is the consideration at the moment.

Washing Machines—There is a fairly good trade. Prices are steady. The quotations now are: Round, reacting washer, per doz., \$56; square, reacting washer, per doz., \$59; Eclipse, \$48; Dowsell, \$36; New Century, \$72.

Oil Stove Wick—Prices are steady since the advance of about 10 per cent. last week.

Steel Track Door Hangers—We quote as follows: Steel track, 1x3-16 inches, \$3.75; 1 1-4x3-16 inches, \$4.75. At least one house is, however, quoting as low as \$3.50 for 1-inch track hangers.

Chain—Business of a sorting nature continues excellent. Prices are still as follows: 1-4-inch, \$5.60; 5-16 inch, \$4.45; 3-8-inch, \$3.85; 7-16-inch, \$3.70; 1-2-inch \$3.55; 9-16-inch, \$3.45; 5-8-inch, \$3.35; 3-4-inch, \$3.25.

Step Ladders—There is a good demand for pine ladders on this market at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Lawn Mowers—An excellent sorting trade is reported. Prices are unchanged, as follows: Woodyatt, 10 1-2 inch wheel, \$8.50; Star, 9 inch, \$7; Daisy, 8 inch, \$5.75; Philadelphia, 7 1-2 inch, \$7; Ontario, 7 1-2 inch, \$15.80; King Edward, 12 inch, \$9.50 (14-inch cut in above). D. Maxwell &

Sons, 10 1-2 inch, \$7.50 to \$10; 9 inch, \$5.50 to \$6.25; 8 inch, \$4.90 to \$5.50. Discount 50 per cent.

Screen Doors—A good trade is doing in this line. We quote as follows: Common, two or three panel, walnut, 4 inch, \$6.50; yellow and green stained, \$6.75; in natural colors oil finish, \$8.75, with 20c less for 3-inch style.

Screen Wire Cloth—Prices steady at \$1.50 per 100 square feet.

Spring Hinges—An improved trade is reported with prices steady as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Barb Wire—Activity continues. We quote as follows: \$2.75 per 100 lbs. f.o.b. Toronto and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—A sorting trade is doing, prices are firm as follows: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs extra charged.

Coiled Spring Wire—Business continues fairly good at steady prices. Our quotations are as follows: No. 9, \$2.70 per 100 lbs, freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65, freight allowance to 20c.

Wire Nails—Business is active. Notwithstanding the lower quotations in the United States there is no change here at the moment. Quotations are: \$2.45 per keg f.o.b. Toronto, with carlots \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—There is not much activity. Prices keep steady, however, as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2, and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes. No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is less active. Prices are unchanged. We still quote discounts as follows: "C" brand, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—An active demand continues. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

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CANADIAN, ENGLISH,
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FIRE BRICKS, FIRE CLAY,
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SEWER PIPES, CULVERT PIPES,
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DESERONTO, ONT.

Manufacturers of

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Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

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CANADA PLATES, TINPLATES, WIRE ROPE
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C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

Rivets and Burrs—Business keeps active in all sizes. Prices are firm. We quote as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—A good trade continues, manufacturers still reporting difficulty in supplying lines. We still quote: Carriage bolts, common (\$1 list), 3-16 and 1-4-inch, 60 per cent.; 5-16 and 3-8-inch, 55 and 5 per cent.; 7-16 and up, 55 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 66 2-3 and 10 per cent.

Cordage—There is a fairly good demand for binder twine. Deliveries of orders placed early in the season are active. The quotations on binder twine for the season of 1904 are as follows: Sisal, 10 1-4c; standard, 10 1-4c; standard Manila (550 ft.), 11 1-4c; Manila (600 ft.), 12 1-4c; pure Manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are unchanged as follows: Pure manila, 15c; British pure manila, 12 1-2c; sisal, 12c; double lath yarn, 11c; single lath yarn, 10 1-2c; double shingle yarn, 11c; single shingle yarn, 10 1-2c; sasheord 'Hercules,' 32 to 35c; 'Star,' 36 to 38c; cotton rope, 3-16-inch and up, 20 1-2 to 22c; 5 32-inch, 25 to 27c; 1-8-inch, 25 to 28c; cotton twine, 3-ply 25 to 28c; 4-ply 32 to 34c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Cement—Trade is moving sharply, and prices are firm. No changes are recorded on last week's prices. We quote: Canadian Portland, \$1.90 to \$2.25; American Portland, \$2 to \$2.10 f.o.b. Toronto.

Firebrick—Firebricks are in good demand at the following prices: English and Scotch at 28 to 35c.

Building Paper—There is a good demand for building paper, with no change in prices. We quote: Tarred felt, \$1.85 per 100 lbs; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

METALS.

A reduction of 50c in the United States pig iron market, coming after several weeks of uneasiness, has caused a general expectation of lower prices on this market. While quotations are nominally unchanged, it is quite probable that a material reduction will be made in the Canadian market within a few days. In pig tin and ingot copper prices are slightly lower in Great Britain, but no changes have been made on this market. In sheet metals prices

IRON STEEL and METALS

Close prices to wholesale buyers only.

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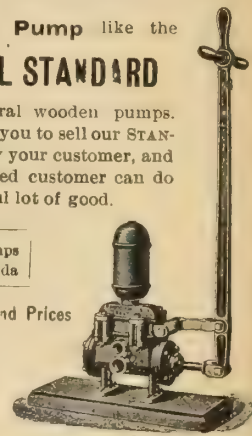
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NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

are firm throughout. There is general activity.

Pig Iron—Buyers are now buying only from hand to mouth, as there is every indication of lower prices. Prices have been easy for some time, so that the reduction of 50c in U. S. iron reported this week makes lower prices on the Canadian market a probability. At the moment prices are still nominally as follows:

Middlesboro, f.o.b., Toronto.....	\$19 25
Hamilton, No. 1	\$18 50 to 19 00
Midland, No. 2	18 50 to 19 00
" No. 2	18 00 to 18 50
" No. 1 f.o.b. Midland.....	17 00 to 17 50
Radnor, f.o.b. furnaces.....	30 00
Londonderry, f.o.b. furnaces.....	17 50 to 18 00

Bar Iron—There is still a good business doing. Prices are fairly steady, though competition for orders is keen. We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, polished, \$2.60; and all-bright, \$3.50.

Tin—There is still a good trade doing. As stocks are light, prices are firm but unchanged at 30 to 30 1-2c.

Galvanized Sheets—There is a good demand at unchanged prices. Quotations are as follows: Queen's Head, \$4.25 for 28 gauge; American, \$4 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tinplates—Considerable business has been done. Stocks are light. We quote: Coke plates, bright, 14x20, \$3.10; charcoal plates, \$4.25.

PLUMBING GOODS.

Activity continues in practically all lines. In iron pipe and fittings the competition for business continues keen and prices are still being cut by some houses. There is an excellent trade in brass goods, prices of which are firm. In enameled ware lines there is considerable competition by United States houses, but the sale of Canadian-made baths and basins continues large.

Lead Pipe—Prices are unchanged. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Prices remain unchanged, while there is a good amount of trade being done. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8-inch pipe 40 and 5 per cent.

Iron Pipe Fittings—A brisk trade is being done, with considerable price-cutting. We quote nominally: Malleable fittings, 20 per cent.; cast iron (standard), 57 1-2 per cent.; headers, 52 1-2 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 per cent.; nipples up to 6-inch inclusive, 67 1-2 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

Iron Pipe—Prices are being cut by dealers, and a considerable amount of business is being done. We quote nominally f. o. b. Toronto: Black pipe, 1-8-inch, \$3.05; 1-4-inch,

THE BANNER COLD BLAST LANTERN

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We make twelve different Styles of Lanterns in Tin, Antique Copper and Solid Brass.

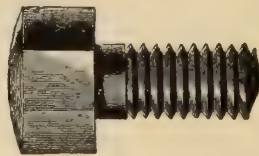
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THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs, Etc. Cold Punched Nuts of every variety of finish.

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Mechanically Winds Any

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The only hand spring winder made that will do so accurately.

Can be used in vise or lathe and will wind any size spring any desired length.

Write for Supplement "A" of the Green Book of Hardware Specialties for description and price.

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Mfrs. of Cutlery and Hardware Specialties.

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GLAZIERS' DIAMONDS

Sharratt & Newth

43 and 44 Percival Street, - London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

Established 1815

ALSO
Lead Vices,
Carbon Tools,
Etc., Etc.,



Agents for Canada: A. Ramsay & Son, Montreal

GLAZIERS' DIAMONDS



Our diamonds were first on the market and still remain first with up-to-date improvements. We claim for them Superiority over All Others in Quality and Workmanship.

Glaziers' Diamonds of every description, for all purposes, supplied.

Established 1815

CANADIAN AGENT

GODFREY S. PELTON

338 St. Paul St., - Montreal

A. Shaw & Son

52 Rahere St., E.C., London

\$2.07; 3-8-inch, \$2.25; 1-2-inch, \$2.50; 3-4-inch, \$3.22; 1-inch, \$4.58; 1 1-4-inch, \$6.47; 1 1-2-inch, \$7.85; 2-inch, \$11.05; 2 1-2-inch, \$19.25; 3-inch, \$22.75; 3 1-2-inch, \$28.75; 4-inch, \$35.25. Galvanized pipe, 1-4-inch, \$2.88; 3-8-inch, \$3.11; 1-2-inch, \$3.42; 3-4-inch, \$4.40; 1-inch, \$6.35; 1 1-4-inch, \$8.80; 1 1-2-inch, \$10.75; 2-inch, \$14.80.

Enameled Ware—Competition is still keen and prices are still low, especially for "B" quality. We quote: "Standard" 5 1-2 feet rolled rim, first quality, at \$21.60; second quality, \$15.50 to \$16.

Copper—A fair trade is reported in ingot, also an excellent movement in sheet copper. We quote: Ingot copper, \$13.75, and sheet copper, \$20 per 100 lbs.

Brass—There is a fair trade, with the discount steady at 15 per cent.

Lead—There is a good demand at unchanged prices. We quote \$3.30 per 100 lbs. for pig lead and \$3.65 for bar lead.

Zinc Spelter—Stocks are light. Buying is active at 6 to 6 1-2c per lb.

Solder—There is a fair trade. Prices are 1-2c lower. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Antimony—8c per lb.

Old Material—The market still continues to be quiet, with no change in prices. We quote: Heavy copper and wire, 10 1-4c per pound; light copper, 9 1-4c per pound; heavy red brass, 9 1-4c per lb; heavy yellow brass, 8 to 9c per lb; light brass, 5 to 5 1-2c per lb; lead, \$2.50 per cwt; scrap zinc, 3c per lb; iron, No. 1 wrought, \$10; No. 2 wrought, \$3; machinery cast scrap, \$13; stoveplate, \$10; malleable and steel, \$4; old rubbers, 5c per lb; country mixed rags, 65c per 100 lbs.

PETROLEUM.

The market is steady, with prices unchanged, as follows: Canadian prime white, 18 1-2c; Canadian water white, 20c; American prime white, 19c; American water white, 21 1-2c, ex-warehouse.

COAL.

There is an excellent trade doing. Prices are firm throughout. We quote: Anthracite, \$5.25; bituminous for steam purposes, \$2 to \$4, according to quality, f.o.b. Buffalo and bridges.

Hides, Skins and Wool.

Considerable activity is being exhibited in the market and prices are firm. A slight advance of 1-2c per lb. in unwashed wool and another of 1-4c per lb. pulled wools, super, are the only quotable changes this week. Prices are as follows:

HIDES.

No. 1 green, per lb.	0 08
" 2 " "	0 07
" 1 " steers, per lb.	0 08 1/2
" 2 " "	0 07 1/2
Cured, per lb.	0 08 1/2

CALFSKINS.

Veal skins, No. 1, 6 to 14 lb. inclusive	0 11
" " " 2 " "	0 09
" " " 1 15 to 20 lb " "	0 10
" " " 2 " "	0 08
Deacons (dairies), each	0 65
Sheep skins	1 00
Lamb skins	0 30

WOOL.

Unwashed wool, per lb.	0 09 1/2	0 10 1/2
Fleece wool, new clip, per lb.	0 16	0 16 1/2
Pulled wools, super, per lb.	0 18	0 20 1/2
" " extra	0 20	0 22

PERSONAL MENTION.

Mr. A. H. Illsey, hardware and tin merchant, Picton, Ont., is disposing of his business.

Mrs. Jane Wood, wife of the late Hon. A. T. Wood, of Wood, Vallance & Co., died at her home in Hamilton on Wednesday.

Mr. Harry Keffer, clerk with the Manitoba Hardware and Lumber Co., Virden, was drowned at Virden on Saturday.

Mr. W. Thomson, editor of the Oil and Colorman's Journal, 19 Ludgate Hill, London, was a caller at the Montreal office of Hardware and Metal this week. Mr. Thomson has made a tour of the United States and Canada, and speaks highly of Canada.

SPRING CHICKEN WINDOW DISPLAY.

A suggestion for a unique show window display of poultry netting and fencing materials is made by H. A. Woodward, Franzen Bros., Riverside, Cal. The arrangement contemplates covering the floor of the window with clean sand. Rolls of wire netting and coils of smooth fence wire are arranged just inside and parallel with the glass, these extending from each end about one quarter of the length of the window. This leaves half of window front unincumbered. A keg of netting staples and one of fence staples, with the heads removed, are to be laid on their sides so that a portion of the contents will spill upon the sand. A fence is built across the length of the window, dividing its depth into two equal parts. The fence is to be exceedingly primitive in its construction, composed of sundry and miscellaneous strips of boards and wood of various kinds and sizes, the object being to make the fence as crude and unattractive as possible. On the fence are to be nailed signs of a character frequently seen along country roads, making them as pertinent and suggestive as possible. Some of these might read: "Buy your hardware at ———," "Fair treat-



FIRE-PROOF GLASS WINDOWS.

They give absolute security—resisting intense fire heat, as well as the action of water.

Arranged to open with this "fusible link" attachment, they close and lock automatically if a fire occurs—150° melts the link—thus giving complete and perfect protection.

This "wired glass" admits the light as freely as plain glass—is rather ornamental in effect, and greatly lessens insurance rates.

Full information if you write
METALLIC ROOFING CO.,
 Wholesale Mfrs. LIMITED,
 TORONTO, CANADA.

ment at ———," "I trade at ———," "Don't swing on the gate," etc. Between the fence and the back of the window are placed a hen and brood of little chickens, which are calculated to arrest the attention of passers-by.

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special Correspondence of Hardware and Metal

Vancouver, May 21, 1904.

ON May 11 Japan's trade envoy arrived from the Orient on the C. P. R. steamer Empress of India. He is Mr. Issa Tanimura, Ph.D., LL.B., of Tokyo. Mr. Tanimura's especial mission in America at the present time is to look into trade conditions in Canada, the United States, and Mexico. He has left for the latter republic and will make an extensive trip in pursuit of information. Later he will visit the United States and Canada, and his findings will be reported on exhaustively to his government.

Interviewed before he left the city, Mr. Tanimura said: "It has been the one great desire of Japan to open up trade with Canada. At present the greater part of our imports come from the United States. Of course, while the war is on we do not expect our trade to increase with any country, but I have strict orders to inquire into trade conditions in Canada and report on prospects when I return home."

Mr. Tanimura will visit England and remain there several months after he

has made a tour of this continent. He will come back via Montreal when he is returning to Japan, which will not be for a year or so. The Japanese trade commissioner is a highly educated gentleman, a graduate of Yale University. Though he has spent a good deal of time in the U. S., this is his first visit to Canada.

* * *

There arrived in the city a few days after the Japanese trade envoy reached here from Japan, the newly appointed trade commissioner from Canada to Japan, Mr. Alexander MacLean. He will be a passenger next Monday on the same steamer, the Empress of India, by which the Japanese commissioner arrived. Crossing each other as they do in this rather coincident manner, the object of the two commissioners is almost identical. Mr. MacLean is commissioned to go to Japan and gather information on trade openings and opportunities to extend our exports in the Mikado's domains. That object should be readily accomplished if, as Mr. Tanimura, the Japanese commissioner, says, the Japanese Government is sincere in its desire to build up a trade with Canada.

Mr. MacLean is this week spending his time to good advantage, meeting those business men of the city who are anxious to form connections in Japan, and also meeting those who are posted on some of the conditions. He has announced himself as pleased to meet all who are interested in developing Canadian trade in the Orient, and has been making the Board of Trade rooms his headquarters for certain hours to give the business public an opportunity to meet him.

In this way Mr. MacLean is gaining valuable insight into many matters pertaining to trade with Japan, and from the closer touch the merchants of British Columbia are in with the trans-Pacific trade, he will be in a better position to advise after he has gained similar knowledge on the other side. The lumber industry has been very carefully explained to Mr. MacLean by a number of the manufacturers, and similarly the conditions of the salmon industry have been laid before him in practical manner. The business public of British Columbia, more especially wholesale and manufacturing concerns, look with great expectation to a considerable advance in the trade which Canada has been doing with Japan. So far the war between Japan and Russia has had no apparent effect on what trade is being done.

* * *

An indication of the keenness displayed in getting hold of desirable land for farming or market gardening is found in the success which attended a sale of Government land in what is known as the Hastings Townsite, immediately adjoining the City of Vancouver on the eastern side. Yesterday the Provincial Government held an auction of the lands in this district, and nearly all was in acreage or "small holdings," as it is known. There were blocks of from 4 to 20 acres in extent, and while some of it has heavy clearing to be done, nearly all can be said to be suitable for small ranches and market gardens, orchards, chicken ranches and the like. The bid-

ding was very keen, and almost all the lots put up were disposed of, the buyers in most instances being actual settlers, men who intended making their homes on the lots they were buying. But few parcels were picked up by land speculators. The terms on which the land was sold was 25 per cent. cash and the balance in three equal payments.

The opening of this reserve to public purchase will have a good effect in providing places for incoming settlers who may not wish or be equipped to make a living in a city. Hitherto many of the people who have come to British Columbia to locate have been handicapped by the fact that there was practically no choice for them in the way of occupation. Many people have been getting on the land for the past two years, and the movement is very much more marked this year, but the strange part of the situation is that very few of the people really know how much land can be made fit for rural occupations. The area in the province, even in the lower mainland, which has always been looked to as a farming section, is much greater than most people imagine. Many of the sturdy pioneers who built up and cleared eastern Canada would find places here where their descendants do not dream of looking. When the residents of British Columbia realize how much land they have to offer for settlers desiring rural occupation, and take hold of the matter in systematic fashion, the question of population to produce what the home market requires will be solved.

* * *

The vicissitudes of steamboating on the Yukon River were exemplified by the fate of the steamer Leah, which sank at Cliff Creek near Dawson, on May 17. She had successfully avoided the ice jam when the river broke up, and was riding on a big floe. When that broke up and she was sliding safely into the water, a big jack-screw fell from the upper deck of the river boat and, striking the thin hull, dropped clear through the bottom. The vessel, of course, sank and an expensive job of raising her lies before her owners. Her value is \$80,000.

* * *

Oil in the Alaskan District has long been acknowledged by experts to exist. In fact considerable exploratory work has been carried on at one time and another. The latest information is from White Horse, to the effect that Norman Macaulay, an old timer of the Yukon District, is, with others, interested in a 900 acre tract of oil land on Chilkat Point, near Kayak Island. An English syndicate is located at one side of the Macaulay property, and Thos. Lipsey, the Klondike millionaire, now resident in Seattle, has a large holding on the other side. The English syndicate has two drilling machines on its property and is driving holes. One hole has been sunk a depth of 600 feet, and is now yielding four barrels of oil per day. One hundred and fifty men are employed on the operations.

* * *

What are said to be the last two ships to load lumber at the Hastings mill, in this port, for some time, are soon expected to arrive. They are the British ship County of Kinross, due any day, having sailed from San Francisco on

the 6th inst., and the British barque Donna Francisca, 2,163 tons, which is now at San Francisco discharging cargo. The former loads for Calais and Havre, France, and the latter for Callao, Peru. The cargo for these vessels is awaiting them, having been cut before the mill closed down.

* * *

Mr. A. Haslam, whose large saw mill was burned at Nanaimo last week will immediately rebuild. As the dry-kilns and yards were saved from destruction and one of the big mill boilers is fit for use, it will not be long before the operation of the sash and door factory will begin.

* * *

A notice in the Official Gazette reserves certain lands belonging to the Crown, and hitherto unappropriated, for the purpose of enabling the Island Power Co., Limited, to make a selection for the purpose of a pulp mill. This is in accordance with the Act to encourage the establishment of the pulp industry. The lands are reserved for two years under the Act. The company has had some of the reserves marked on the mainland and on smaller islands of the coast waters as well as on Vancouver Island.

* * *

A party of McGill University students, under the guidance of Dr. A. W. J. Wilson, of the Geological Department of the university, and Dr. J. B. Porter, professor of mining, assisted by Mr. J. F. Robertson, instructor in mining, are taking a five weeks' course of practical work in the Rossland mines. The party consists of 18 students, and they will also take some practical instruction at Lethbridge, the Galt coal mines being there, and in Northwestern Ontario, or the Rat Portage District.

* * *

The Western Canadian Can Factory, of Cliff & Sons, at New Westminster, has been greatly enlarged recently. An addition 75x50 feet is being completed. The plant is very fully equipped now, and the process of turning out cans for various industries is done with a minimum of labor. The sheet of tin is put in the first machine and goes through a succession of processes until the complete can is turned out at the other end of the factory.

* * *

A big syndicate of eastern capitalists and lumbermen have become incorporated as the Kamloops Lumber Company, Limited, completing a deal which was made some weeks ago for the purchase of a saw mill at Kamloops and valuable timber limits in the district. The principal parties interested are: Geo. McCormick, M. P., Orillia, lumber manufacturer; Geo. W. Fowler, M. P., Sussex, N. B., barrister; Lt.-Col. John Irvine Davidson, Toronto, wholesale merchant; John Alex. McGillivray, Uxbridge; Hon. Geo. E. Foster, and Hon. Elliot Grasette Stevenson, of Detroit. The chief place of business of the newly incorporated company is Toronto.

* * *

The boards of trade of some of the leading cities are arranging to send delegates to Ottawa to make representations on behalf of the request of the lumbermen that a duty be imposed on lumber from the U. S., equal to that

imposed on Canadian lumber going into the republic. The idea emanated from the Victoria Board of Trade, and Vancouver and other cities are adopting it. A special collection is being made to defray the cost. The delegation will be accompanied by members of the Lumber Manufacturers' Association.

The Hastings Shingle Mfg. Co., operating the largest shingle mill on the coast, intends rebuilding on the site of the large mill destroyed last year. While this decision was reached at a meeting of the company some months ago, active operations have been delayed. The mill destroyed had a daily capacity of 50,000 feet of lumber and 200,000 shingles. Mr. Jas. A. McNair, president of the company, said recently: "This capacity would have been doubled, perhaps trebled, had conditions in the industry improved, and a tariff been imposed as requested by the lumbermen of the province. Now, however, it is more likely that we will curtail the capacity when we commence rebuilding. The large shingle mill still operated by the company in Vancouver, has a capacity of 1,000,000 shingles per day, the largest shingle mill in the world, but is only worked for 400,000 shingles per day.

"Loyalist as I am," said Mr. McNair recently, "unless the Dominion Government does something very soon to ameliorate conditions, the people of Canada may have a rude awakening by the demands British Columbia might make for a separation."

PITTSBURG METAL MARKET.

From The Iron Trade Review, May 26, 1904.

CURTAILMENT of pig iron production is the next move of importance in the iron trade. With an output at the opening of the month at the rate of more than 19 1-4 million tons a year, and an evident dwindling of demand, with most buyers only five weeks from the end of present contracts, blowing out seems to be the natural recourse of a good many merchant stacks. Prices have declined further in the past week, and furnaces to which the present level means only getting back cost, find no good ground for piling iron. There is undeniably a great difference between the current movement of iron and steel products and that which is indicated for the third quarter by the orders already entered for that period. Mills find their week-to-week shipments not markedly less than at this time last year, and if this condition and the strong points in the general situation in the west and the south, together with the recently improved crop prospects, were allowed to determine, there would be a brighter story to write of iron and steel. But willingness to buy has largely departed, and for the present the trade accepts that as the controlling factor. The general expectation of lower prices, however well or ill founded, is sufficient to account for a large part of this hesitation; the balance, as has been done for months, is assigned to the railroads, which prefer to let their needs accumulate while rolling stock and tracks wear

out under a traffic but little under the maximum of recent years.

Pig Iron—The sale of 500 tons of No. 2 foundry at \$13 Pittsburg, establishes the low point on that grade for this year. Inquiries in the market at present for about 4,000 tons of forge and foundry iron will no doubt result in the fixing of a slightly lower level than has heretofore existed. On forge iron the best that has been done is \$12.85 Pittsburg, on 1,500 tons for delivery to July 1. Lower prices will be made, however, to take the business now offered. On Southern iron \$9.50 is still being quoted at Birmingham for delivery to the middle of the year, and for third quarter delivery \$9.25. It is probable, however, that the latter price would be quoted on a desirable order for June delivery. On forge iron \$12.60 Pittsburg is being offered. There is no demand for Bessemer and there is no telling what prices might be named on a good order. While the asking prices are \$12.50 at the furnace, it is believed \$13 Pittsburg could be done. We quote as follows:

Bessemer, Valley	\$12 40 to	\$12 50
Bessemer, Pittsburg	13 25 to	13 35
No. 1 Foundry	13 60 to	13 75
No. 2 Foundry	13 00 to	13 35
Gray forge, Pittsburg	12 75 to	12 85
Chilled basic, Valley	12 15 to	12 25
Chilled basic, Pittsburg	13 00 to	13 10

Steel—While consumers are specifying freely on existing contracts, little new business is being placed. Association mills are still holding to agreed quotations, but Bessemer and open-hearth billets are being freely offered at \$22 Pittsburg, and these prices could be shaded on a fair tonnage.

Bars—Eastern bar iron manufacturers last week reaffirmed quotations on bars which are 1.35c Pittsburg and 1.49 1-2c delivered New York. The new tonnage in both iron and steel bars continues light, and iron prices continue to be shaded. We make the following quotations: Bar iron, 1.35c to 1.40c Pittsburg, for local delivery, while for western shipment quotations are based on 1.25c to 1.30c Pittsburg.

Structural Material—The contract for the structural material for the elevated tracks of the Wabash on the South Side has not yet been placed. Heyl & Patterson this week received a contract for the erection of a coal washery from the Dominion Iron & Steel Co., which will require 3,500 tons of steel. Quotations remain unchanged as follows: Beams and channels, 3 to 15 inches, 1.60c; 18 to 24 inches, 1.70c; tees, 1.65c; zees, 1.60c; angles, from 3 to 16 inches, 1.60c; universal mill plates, 1.60c.

Pipes and Tubes—Demand for line pipe and oil country goods is better than ever before in the history of the pipe trade. The development of the Kansas and Texas fields and the heavy requirements of line pipe have thrown a tremendous tonnage to the pipe mills. The demand for boiler tubes, however, is only fair, while on merchant pipe there is considerable cutting. Concessions of 10 per cent. from existing dis-

counts have been reported, although the largest producer is adhering to former prices on this material.

Wire and Wire Nails—Concessions of 2 1-2c per 100 lbs. are being made on wire and wire nails to distant points. The largest producer is still adhering to list quotations, but practically all of the independents are making these concessions. No change has been made in the ruling prices on cut nails. We make the following quotations: Wire nails, carload lots to jobbers, f.o.b. cars Pittsburg, are quoted \$1.90 base; plain wire, carload lots, \$1.80 base; barbed wire, carload lots, \$2.20 base; staples, carload lots, \$2.05 keg. Galvanized, 30c extra. Carload lots to retailers are held at 5c advance in all lines, and on less than carload lots a further advance of 10c is charged. Steel and iron cut nails, carload lots, \$1.75, and less than carload lots, \$1.80 f.o.b. Pittsburg, plus freight to points of destination. Terms, 60 days, less 2 per cent. off in 10 days.

Coke—Lower prices are being named by some Connellsville producers of foundry coke, as low as \$1.90 having been done to consumers this week. To dealers one large producer is quoting \$1.85, and the prevailing prices to consumers range from \$1.95 to \$2. A few operators for special grades of coke, however, continue to secure somewhat higher prices. On furnace coke \$1.50 to \$1.60 is being done. The output of the Connellsville region still continues heavy, and not many ovens are shutting down, despite the low prices that are ruling. For the week ending Saturday, May 14, the production of the upper region reached 209,147 tons, 18,545 out of a total of 23,041 ovens being in operation. The production of the lower region was 55,898 tons and 4,684 out of a total of 5,645 ovens were in operation.

LONDON METAL MARKET.

From The Metal Market Report May 25.

Pig Iron—Scotch warrants, Glasgow, closed at 51s 9d, a decline of 3d. Middlesboro No. 3 foundry at 43s 7 1-2d, an advance of 1 1-2d.

Tin—Spot tin opened easy at £124 5s, futures £123 15s, and after sales of 270 tons of spot and 210 tons of futures closed easy at £124 2s 6d for spot and £123 12s 6d for futures, making prices as compared with last week £1 9s 6d lower on spot and £1 10s lower on futures.

Copper—Spot copper opened easy at £56 12s 6d, futures £56 13s 9d, and after sales of 25 tons of spot and 350 tons of futures, closed easy at £56 7s 6d for spot and £56 10s for futures, making price as compared with last week 7s lower on spot and £1 12s lower on futures.

Lead—The market closed at £11 13s 9d, making price as compared with a week ago 2s 6d lower.

Spelter—The market closed at £22, making price as compared with last week 2s 6d lower.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1.000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

BUSINESS CHANCES.

A GOOD HARDWARE STORE and tinware business, with tinshop, in a progressive town, about 1,000 population; stock between \$4,000 and \$5,000; good reason for selling. Address, Box 136, HARDWARE AND METAL. (24)

HARDWARE and tinware business for sale, in one of the best business towns in Ontario; stock about \$1,200; rent low and dwelling in connection; business capable of expansion; good opening for a practical tinsmith and hardwareman. For full particulars address Box 133, HARDWARE AND METAL. (22)

HARDWARE BUSINESS—About \$4,000, in largest mining town in New Ontario. For particulars address Horne & Hardy, Copper Cliff. (24)

HARDWARE STORE and tinsmithing business—About \$2,000, in town of Frankford. For particulars address John Lewis & Co., Belleville, Ont. (22)

MACHINE SHOP TO LET—In the centre of Ottawa; modern tools; well equipped; good trade; established fifteen years. Particulars, address 367 Besserer street, Ottawa, Ont. (f)

TO SELL OR RENT—Cheap pump shop and tools; with or without engine; opposition twelve miles. J. R. Williams, Gorrie, Ont. (f)

SITUATIONS VACANT.

FIRST-CLASS PLUMBER—Also first-class tinsmith—at once; state experience and wages. T. J. Campbell; plumber, Midland. (f)

GENERAL BLACKSMITH—First-class shoer; steady job; state wages. Box 219, Thamesville. (f)

GAUGE LATHE HAND—At once; must be good man; state wages and experience. Coombe & Watson, Kincardine. (f)

MARBLE CUTTER—Good letterer—On granite and marble; steady work and good wages to right man. J. Perrott, Alliston Marble Works. (f)

MECHANICS—Two first-class brass finishers, Monitor lathe hand, and improvers to brass finishing; Wilson and Cousins, 16 Sheppard street, Toronto. (f)

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL

Room 308 McIntyre Block,

Winnipeg, May 25, 1904.

THE trade situation throughout the country is much improved and business is now resuming a more normal condition. The general appearance of business in the city is quite satisfactory. The market practically remains the same with little or no change of any account. We quote:

Barbed wire, 100 lb.....	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91

Annealed wires (uncoiled) roc. less.	
Horsenails, 40 per cent. discount.	
Horseshoes, iron, No. 0 to No 1.....	\$4 75
No. 2 and larger.....	4 45
Snow shoes, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 45
No. 2 and larger.....	4 20

Cut Nails—	Wire Nails—
2d 1 in.....\$4 10	1 in.....4 15
3d Fin. 1½ in.. 4 10	1½ in.....4 10
3d 1½ in.....3 75	1½ ".....3 70
4d 1½ in.....3 50	1½ ".....3 50
5d 1½ in.....3 50	1½ ".....3 50
6d 2 in.....3 40	2 ".....3 40
8d 2½ in.....3 25	2½ ".....3 25
10d 3 in.....3 20	3 ".....3 20
20d 4 in.....3 15	3½ ".....3 15
30d 4½ in.....3 10	4 ".....3 10
40d 5 in.....3 10	4½ ".....3 10
50d 5½ in.....3 10	5 ".....3 10
60d 6 in.....3 10	5½ ".....3 10
	6 ".....3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100lb.....	8 50
Jessop.....	13 00

Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10

Galvanized Iron, Apollo, 16 gauge....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10½ oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28.....	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	

Genuine Russian, per lb.....	11
Imitation.....	07 to 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 50

Tinplate, IC charcoal, 20 x 28, box....	9 50
" IX.....	11 50
" IXX.....	13 50
Ingot tin.....	35

Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 15
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50

Pig lead, 100 lb.....	5 50
Black iron pipe, ¾ inch.....	3 30
" ¾ ".....	3 30
" ¾ ".....	3 40
" ¾ ".....	3 75

Black iron pipe, ¾ inch.....	4 30
" 1 ".....	6 25
" 1½ ".....	8 75
" 1½ ".....	10 50
" 2 ".....	14 50

Rope, sisal, 7-16 and larger, basis.....	11 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrn.....	11 25
Solder.....	20
Axes, chopping.....	\$ 6 75 to 12 00
" double bits.....	12 00 to 18 00
Bluestone.....	5 25

Screws, flat head, iron, bright.....	.85 and 10 p.c.
Round " ".....	80 p.c.
Flat " brass.....	.75 and 10 p.c.
Round " ".....	.70 and 10 p.c.
Coach.....	70 p.c.

Bolts, carriage, 3-16 and ¾.....	60 p.c.
" 5-16 and ¾.....	.55 and 5 p.c.
" 7-16 and up.....	55 p.c.
Bolts, machine, ¾ and under.....	.50 and 5 p.c.
" 7-16 and over.....	.55 and 5 p.c.

Bolts, tire.....	.60 and 5 p.c.
Bolt ends.....	.55 and 5 p.c.
Sleigh shoe bolts.....	70 p.c.
Machine screws.....	70 p.c.
Plough bolts.....	.55 and 5 p.c.
Square nuts, case lots.....	.3c. discount.
" small lots.....	.2½c.
Hex " case lots.....	.3c.
" smaller lots.....	.2½c.

Rivets, iron.....	.50 and 10 p.c.
Copper, No. 8.....	32
No. 12.....	36

Coil chain, 3-16 inch.....	9½
" ¾ inch.....	7½
" 5-16 inch.....	5½
" ¾ inch.....	5½
" 7-16 inch.....	4½
" ¾ inch.....	4½
" ¾ and ¾ inch.....	4

Spades and shovels.....	.40 and 5 p.c.
Harvest tools.....	60 p.c.

Axe handles, turned, s. g. hickory, doz..	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60

Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.

Building paper:	
Anchor, plain.....	65c.
" tarred.....	70c.
Pure fibre, plain.....	67½c.
" tarred.....	80c.

Ammunition, cartridges, Dominion-R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
American R.F.....	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.

Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	10 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00

Shot, Ordinary, per 100 lb.....	6 00
Chilled.....	6 50
Powder, F.F., keg.....	4 75
F.F.G.....	5 00

Tinware, pressed, retinned.....	70 and 10 p.c.
" plain.....	75 and 2½ p.c.
" pieced.....	37½ p.c.
Japanned ware.....	37½ p.c.

Enamelled ware, white.....	45 p.c.
" Famous.....	50 and 10 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American	27½c.
Prime white American.....	25½c.
Water white Canadian.....	25½c.
Prime white Canadian.....	24½c.

SCRAP.

No. 1 cast iron.....	\$14 to 15
No. 2 ".....	7
Wrought iron scrap.....	5
Copper (heavy).....	8½c. per lb.
Yellow brass (heavy).....	7½c. "
Light brass.....	5c. to 6c. "
Lead pipe, or tea lead.....	2c. to 2½c. "
Zinc scrap.....	1c. "

PAINTS, OILS AND GLASS.

White lead.....	\$6 00 to \$6 50
Putty in bladder, 2½ lb., in keg of 100 lbs.	0 02½
Turpentine, pure, in barrels.....	\$ 97
Less than barrel lots.....	1 02
Linseed oil, raw.....	0 52
Boiled.....	0 55

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine....	0 29
" " extra engine.....	0 27
" " dynamo.....	0 35
" " black.....	0 22
" " cylinder.....	\$0 50 to 0 75
(as to quality)	

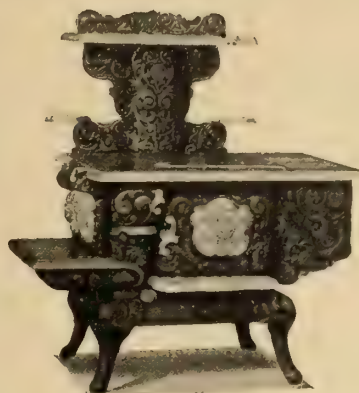
Harness oil.....	0 50 to 0 60
Neatsfoot oil.....	1 00
Vegetable oil, 1st pressure.....	1 00½
" " 2nd pressure.....	1 09½

THE SHELLAC MARKETS.

A DVANCES in the shellac market since January 1 have broken all records. In some brands the advance in four months has been as great as in entire years previously, notably D. C., which was quoted at 70c in January of this year and is now at 95c. This is a clear advance of 25c per pound in four months. D. C. has been on the up grade for several years. In May, 1901, it was quoted at 26c; in 1902, at 37c; in 1903, at 48c, and now at 95c. Thus, while D. C. advanced 11c from May, 1901, to May, 1902, and another 11c from May, 1902, to May, 1903, it has during the past year advanced 47c, or just about doubled in price, and since last January its advance has been 25c per pound. Other grades of shellac have had a similar upward movement, but not so spectacular. These advances have been due to scarcity of supply, and the effect on the business is not altogether salutary. It has resulted in hand-to-mouth buying, for buyers will not stock heavily at what they fear is the top of the market. It has also resulted in a search for substitutes, the use of cheaper materials, and a renewed effort on the part of German chemists to produce a synthetic article which they hope will prove to be a successful substitute for shellac for ordinary uses.

—Paint and Oil Review.

"Matchless Treasure" RANGE



4-Hole Coal or Wood Range

Sheet Steel Oven, Duplex Grate,
Nicked Steel Edges, "Never-Break"
Steel Base.

A splendid baker, moderate in
price, and economical on the fuel.

EVERY "MATCHLESS TREASURE" GUARANTEED.

THE D. MOORE COMPANY, HAMILTON

MANITOBA DEPOT

MERRICK, ANDERSON & CO.,

117 Bannatyne St. East, Winnipeg

Stephens
PAINTS

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14/10/1904
Out Book 1904
Page 30
thus

BEST ON EARTH
MADE WITH
MANITOBA
LINSEED OIL

MANUFACTURED BY
G. F. STEPHENS & CO., LIMITED
WINNIPEG, CANADA.

PAINT, OIL AND BRUSH TRADES

Substitutes for Turpentine

ACCORDING to Utz, in the last issue of the "Chemische Revue über die fett-und Harz-Industrie," there seems a possibility of a mixture of Russian and American turpentine being put on the market as purely American, some recent shipments having exhibited a peculiar odor attributed to the presence of the former article—an assumption to which color is lent by the fact that considerable parcels are being shipped from Russia to the States.

Apart from this, Utz has recently examined a number of samples of adulterated turpentine. One specimen of "white spirit" was found to be perfectly colorless, without the slightest trace of the characteristic violet-blue fluorescence or levorotatory power, whilst the refractometer index marked 37.0 deg. of the Zeiss scale. Another turpentine substitute was also colorless, optically

inactive, and, like the preceding one, had an odor of toluol, but a refractometer index of only 4.8 deg. A third sample differed in having a faint smell of turpentine, a slight dextro-rotation (0.20), sp. gr. 0.8,065 at 15 deg. C., and the refractometer index 33.0 deg.

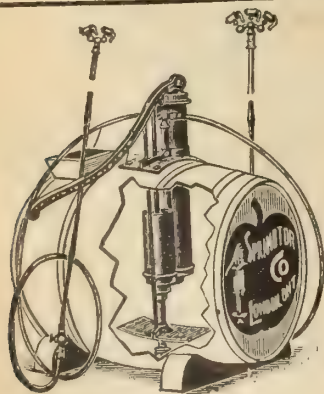
Various color-reaction tests were applied, including that of Lyon (hydrochloric and nitric acids), that of Cinperesco for sesame oil and liver oil (nitric acid, sulphuric acid and water), bromine water, and iodine water, but though fairly definite results were obtained when working either with pure turpentine or the unmixed substitutes, it proved very difficult to detect the presence of petroleum distillates in admixture with the turpentine, except perhaps in the case of iodine water. With this reagent the following results were obtained: With pure turpentine the two liquids take a long time to separate, the iodine water is colorless, and the

turpentine orange colored. In the case of the turpentine substitutes, however, separation occurred very soon, and while the reagent remained colorless the oil turned raspberry red instead of reddish yellow. With mixtures of turpentine and substitutes the colorations were intermediate between the two shades cited. By this test, performed in comparison with pure turpentine and the unmixed substitutes, the presence of adulterants can be detected; and should the refractometer index of the sample under examination fall below 1.4,680 at 20 deg. C., it may be confidently assumed that the turpentine is adulterated with petroleum distillate. This confirmatory test is the more reliable inasmuch as, contrary to the previous hypothesis, the refractometer index of pure turpentine appears to undergo no change during storage—at least, within the first six months.—Colorman's Journal.

Memorial Windows

UNEXCELLED
DOMESTIC ART GLASS

H. E. St. George, London, Ont.



THE SPRAMOTOR

is recognized by the users as the most durable and efficient apparatus yet invented, for the

Prevention of blight and bugs on fruit and potatoes

For the destruction of wild mustard in the grain crops without injury to the grain, and for

The painting of buildings.

Has been awarded First Place by the Canadian Government in actual contest, and

The Gold Medal at the Pan-American.

The Trade fully protected.

Write for particulars and discounts. Terms liberal

THE SPRAMOTOR CO.,

68-70 King St.,

LONDON, CAN



You can get Paint at almost any price. This does not apply to Hollywood, as it is fixed in price as it is in quality.



Being designed to give entire satisfaction to the most critical customer, it is as low in price as it is possible to get a thoroughly reliable article.

Hollywood Paste, Ready-Mixed and Floor Paints

They wear on the job, not off it.

The Imperial Varnish & Color Co.

LIMITED,

TORONTO, ONTARIO, CANADA.

LINSEED OIL

Raw and Boiled

"GUARANTEED PURE"

MANUFACTURED BY

**Canada Linseed Oil Mills,
MONTREAL.** LIMITED,



BARRELS WANTED!!

We are open to buy good, sound, oak
Linseed Oil, Turpentine, Varnish, and
Machine Oil Barrels.

If You Buy

Varnishes	Paints
Japans	Colors
Lacquers	Glues
Stains	Bronzes
Fillers	Chamois
	Sponges

WRITE TO

R. C. JAMIESON & CO.

LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.



THE WISDOM OF GOOD BRUSHES

IS WELL UNDERSTOOD BY
THE PRACTICAL PAINTER
AND EVERY DEALER.

BOECKH'S STANDARD PAINT BRUSHES

REQUISITE FOR HOUSE AND SIGN PAINTERS, VARNISHERS,
KALSOMINERS, PAPER HANGERS, GRAINERS, ARTISTS, DEC-
ORATORS, CARRIAGE AND COACH PAINTERS, are known from
Halifax to Vancouver as the best money can buy.

SOLD BY ALL RELIABLE DEALERS, THEREFORE YOU SHOULD SELL THEM.
NONE GENUINE UNLESS BRANDED WITH THE NAME "BOECKH."

OPERATING:

Boeckh's Toronto Factories

Bryan's London Factories.

Cano's Newmarket Factories.

UNITED FACTORIES,

LIMITED.

Head Office : TORONTO, Ont.

LONDON BRANCH : 71 Dundas St.

MONTREAL BRANCH : 1 and 3 DeBresoles St.

Paint and Oil Markets

Quebec.

Office of **HARDWARE AND METAL**,
232 McGill Street.
Montreal, May 28, 1904.

ACTIVITY still characterizes the local paint and oil market, and although the holiday on Tuesday interfered somewhat with business, the volume of the week's sales is apparently quite up to the average. Linseed oil and turpentine are unchanged in prices, but the position of neither is regarded as particularly strong. The future seems uncertain. The English linseed oil market is weak, but prices here are so low now that they are scarcely likely to go lower. We quote:

Ground White Lead—Best brands, Government standard, \$4.50; No. 1 \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100-lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100-lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25-lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

Putty—Bulk, in barrels, \$1.40; in 25-lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

Orange Mineral—Casks, 7c; 100-lb kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4; in 100-lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 85c per gallon; 2 to 4 barrels, 84c per gallon. Smaller quantities than barrels, 90c per gallon. Standard gallon of 8.6 lbs.

Linseed Oil—Raw, 1 to 4 barrels, 43c; 5 to 9 barrels, 42c; boiled, 1 to 4 barrels, 46c; 5 to 9 barrels, 45c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in wholesale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels, 141-4c; arsenic kegs, 141-2c; 50 and 100 lb drums, 15c; 25-lb drums, 15 1-4c; 1-lb packages, 16c; 1-2-lb packages, 18c; 1-lb tins, 17c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 141-4c; arsenic kegs, 141-2c; 50 and 100 lb drums, 15c per lb; 25 lb drums, 15 1-2c; 1-lb paper boxes, 16c; 1-lb tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

Ontario.

Office of **HARDWARE AND METAL**,
10 Front street east,
Toronto, May 28, 1904.

ACTIVITY of exceptional degree is reported this week. Business in all lines, particularly white lead, mixed paints and varnishes, is larger in volume than was the case even last year. Prices are comparatively firm. White lead is steadier than for some weeks, while a strengthening tone is manifested in both turpentine and linseed oil. Other lines are unchanged. We quote:

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages

of 25 lb and upwards; 1-2c per lb extra will be charged for 121-2-lb packages; genuine dry white lead, in casks, \$4.50.

Red Lead—Genuine in casks of 560 lb, \$4.25; ditto, in kegs of 100 lb, \$4.50; No. 1, in casks of 560 lb, \$3.75 to \$4; ditto, in kegs of 100 lb, \$4.25.

White Zinc—Genuine, French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5-gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon; No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 43c; boiled, 46c; 5 to 9 bbls, raw, 42c; boiled, 45c, —Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points. Another quotation is: Raw, 1 to 4 bbls, 43c; boiled, 46c; 5 to 9 bbls, 42c; boiled, 45c; 10 barrels and over open, ex-Toronto, 2 per cent. off 30 days.

Turpentine—Single bbls, 81 to 83c; 2 to 4 bbls, 80 to 82c; 5 bbls and over, open, Toronto, Hamilton, London, net 30 days. Another quotation is: Single bbls, 84 1-2c; 2 to 4 bbls, 83 1-2c; 5 bbls, and over, open ex-Toronto with 2 per cent. off 30 days. For less quantities than barrels, 5c per

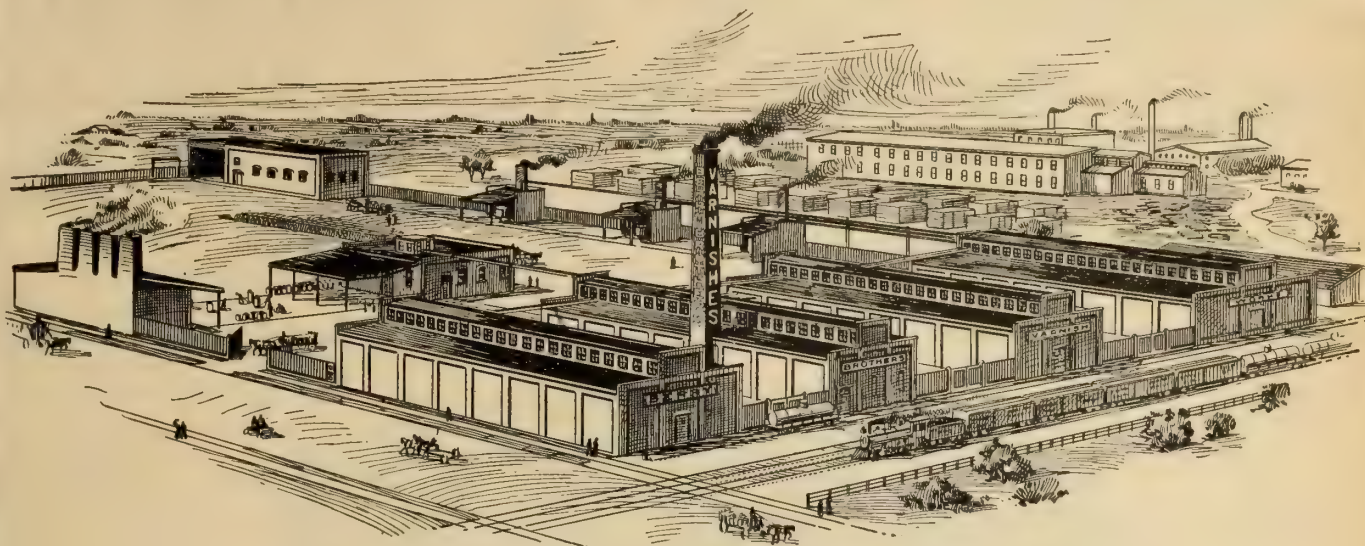


Send us a post card
and let us tell you
all about them.

ANCHOR and ENGLISH LIQUID PAINTS

occupy a unique position among the different brands upon the Canadian market. They stand alone at the top, unrivalled for covering power, permanency of color, and wearing qualities. The only white lead used in their manufacture is the best the world can produce — **Brandram's B. B. Genuine.**

HENDERSON & POTTS, Limited, Halifax.
HENDERSON & POTTS CO., Limited, Montreal.



IT IS NEARLY
HALF A CENTURY

since we commenced to make Varnish. During this period we have acquired a knowledge not only of Varnish, but of the varied needs of varnish consumers that nothing but time can impart, and have also learned how to cater successfully to every varnish want.

Our experience belongs to those who use and sell Berry Brothers' Varnishes.

Safest goods to handle, surest and most reliable goods to use.

WRITE FOR CATALOGUE.

Berry Brothers
LIMITED

WALKERVILLE, ONT.



The HOBBS MANUFACTURING CO.

LONDON, - - CANADA. **LIMITED**

IMPORTERS Sheet Window Glass, Muffled and Cathedral Tints, Ornamental Figured Glass, Polished British Plate, Rolled Plate Glass, Prismatic Sheet Glass.

MANUFACTURERS

Church and Cathedral Leaded Windows, Domestic Art Stained Glass.

Bevelled Plate and Mirrors, Ceiling and Finger Plates, Memorial and Portrait Windows, Chipped, Obscured and Enamelled, Mitred and Sand Cut, Paper Weights and Advertising Signs, Electro Glazed Art Glass and Ornamental Prismatic Glass.

ELECTRO GLAZED ART GLASS

Not a cheap imitation of copper plate, not a dull flat finish, but Electro Glazed with a solid deposit of copper and a bright, clear, polished copper finish.

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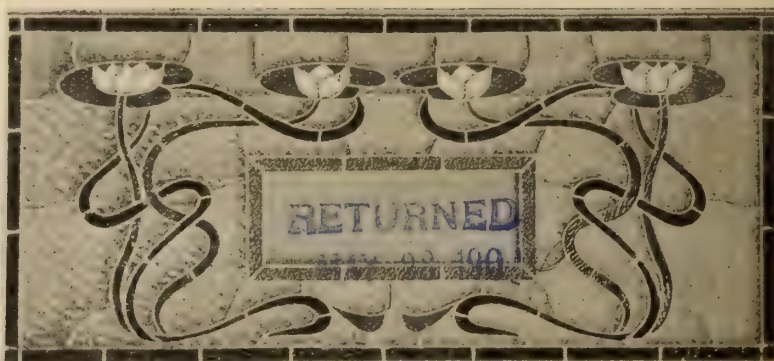
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No. 524



No. 526



No. 527



No. 525

WE CARRY A LARGE STOCK OF WINDOW GLASS. QUALITY THE BEST. PRICES ARE RIGHT. WE MANUFACTURE AND IMPORT EVERYTHING IN GLASS REQUIRED FOR BUILDINGS.

WRITE FOR CATALOGUE AND PRICES.

R. E. THORNE, 768 Craig St.,
MONTREAL

Wholesale Agent and Importer

Dry Colors, Ochres, Bronze Powders,
Aluminum Powder, Schlag Metal,
Bronze Liquids and Varnishes.

Toronto Office—29 Melinda St.

The Quickest
Selling Metal Polishis the usual remark of the trade
when you ask them about**SOLARINE**It satisfies or your money back.
Write for sample order.**SOLARINE DEPOT, TORONTO.**New and Second-Hand Machinery,
Engines, Belting, Pulleys, Factory
Equipment, Etc.Any readers of this paper wanting
any of the above goods may have an
advertisement inserted free in **HARD-
WARE AND METAL**, the machinery
weekly newspaper of Canada, by
enclosing this notice. Address—**HARDWARE AND METAL**

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McCaskill, Dougall & Co.ManufacturersRAILWAY, CARRIAGE AND BOAT **VARNISHES.**

HIGH-GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.**GLUES AGAIN**our IMITATION FRENCH MEDAL
GLUES are of such high classand are so suitable for Export that we would like to quote you. Export trade
in this line is growing rapidly, and we pack in casks or cases as preferred.
Quality unrivalled.**GROVE CHEMICAL CO., LTD.,** Appley Bridge, Lancashire, Eng.**We Have the Glass You Want**

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, LimitedTORONTO MONTREAL LONDON
OTTAWA WINNIPEG.**Have you a
Cranky Customer?**Of course you have. Perhaps you have several
who are confirmed fault finders. Sell them
ISLAND CITY paints and they will have to work
overtime to find anything wrong.Toronto orders filled promptly from Montreal.
We pay extra freight.

TEMPORARY TORONTO PREMISES AT 23 SCOTT ST.

P. D. DODS & CO., Montreal, Toronto, VancouverGROUND IN
PURE REFINED
LINSEED OIL.**MONARCH**PERFECT IN
BODY, DURABILITY
AND FINENESS.**PURE WHITE LEAD**

SEND FOR QUOTATIONS

MANUFACTURED BY

STANDARD PAINT & VARNISH CO., Limited
WINDSOR, ONTARIO.

Paint the Farm Buildings.

1. There are many farmers who allow their dwellings and farm buildings to go unpainted year after year under the delusion that they are saving money by so doing.
2. How often one sees good, substantial buildings exposed to wind and weather for years without protection.

Such houses are sure to deteriorate in value, to say nothing of the loss in appearance.

3. An unpainted building on the farm gives it a run-down appearance no matter how well kept the grounds.

Paint applied to all the buildings will increase the selling price, which is another way of saying will increase the value.

4. A certain amount of pride exhibited in the farm buildings and grounds gives the would-be purchaser the impression that the entire farm is in good condition.

They add an incentive to further beautify the home.

5. Well-painted buildings lend an attraction to the homestead that the young people of the family are sure to appreciate.
6. The work of painting is not difficult. With the best of ready mixed paint, such as manufactured by **THE CANADA PAINT COMPANY**, the farmer may, if he find the skilled labor too expensive, do the work himself.

7. Time to paint. A dry, calm period is the best, and it should be neither too cold nor too hot. Avoid painting while the wind is blowing, as dust particles adhere to the fresh paint, causing it to present a most unsightly appearance.

Dealers Should Address

THE CANADA PAINT CO.,
MONTREAL or TORONTO.

gallon extra will be added, and for 5-gallon packages, 50c and 10-gallon packages 80c will be charged.

Glues—Broken sheet, in 200-lb bbls, 8 to 8 1-2c per lb; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100-lb kegs, \$1.85; bulk in barrels, \$1.45; bulk, less than barrels and up to 100-lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per bbl.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per pound, and 8 1-2 to 9c for single tins.

English Paris Green — Petroleum bbls, 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100-lb drums, 14c; 1-lb packages, 15c; 1-lb tins, 16c; 1-2-lb tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls, 13 3-4c; arsenic kegs, 14c; 50 and 100-lb drums, 14 1-2c; 1-2-lb tins, 18 1-2c.

St. John, N.B.

There is little out of which to make a market report. We have a new oil company called the Canadian Oil Co., who have taken over the business of the Sun Oil Co., and the King Edward Oil Co. This last company was only here for a very short time. The Canadian Oil Co. is a Canadian concern, who have their own Canadian and American refineries. Besides handling burning, lubricating and paint oils, they are large handlers of paints. In prices no changes are reported. Linseeds are still low.

Window Glass.

MONTREAL.

Window Glass—Business is active and prices are unchanged. We quote: First break, 50 feet, \$1.70; second break, \$1.80 for 50 feet. First break, 100 feet, \$3.25; second break, \$3.45; third break, \$3.95; fourth break, \$4.20.

TORONTO.

Business continues to improve, and there is less tendency to cut prices. We quote nominally as follows: Star, first break at \$3.30 per 100 feet and Double Diamond, first break, at \$5.10. Discount, 15 and 20 per cent.

Trade Enquiries

HARDWARE AND METAL will be pleased at any time to open its columns for trade enquiries relating to the hardware, metal, machinery or paint trades. Address enquiries to the Toronto Editor.

CANADIAN AGENTS WANTED.

An English firm, manufacturers of a brand of enamel, desire to appoint Canadian agents in Canada. This line should have a good sale in Canada. Further information will be supplied on enquiry to Toronto Editor, Hardware and Metal.

Government Enquiries.

The names of the firms making these enquiries, together with their addresses, may be obtained from the Department of Trade and Commerce, Ottawa, by quoting office under which the enquiry appears and giving number.

CURATOR, CANADIAN SECTION IMPERIAL INSTITUTE.

71. Inquiry has been received for the names of Canadian firms who supply the necessary materials for fitting up roll-top office desks.

74. A Glasgow firm have asked to be placed in touch with parties in Canada from whom they can get supplies of graphite; also for the names of a few good houses in the Dominion selling paints for ship requirements and engineers' use.

42. Inquiry has been made for the addresses of Canadian makers of elm barrel hoops.

44. A correspondent desires the names of Canadian manufacturers of cultivators suitable for fruit plantations, and also of apple and plum grading machinery.

FROM COMMERCIAL AGENT, MANCHESTER.

38. Manchester importers of calcium carbide at present buying in Sweden, are desirous of obtaining from Canadian manufacturers their prices for same c. i. f., Manchester.

40. Request is made by a Manchester firm for prices of extension ladders from Canadian manufacturers of same.

41. The only manufacturers of advertising matches in Great Britain, already having a limited Canadian connection, are desirous of extending same, and wish to appoint a Canadian agent to effect this.

42. A Manchester firm desires quotations of square and oval top wooden trunks from Canadian manufacturers of same.

RIGHTS OF FOREIGN CREDITORS IN BANKRUPTCY CASES.

(From United States Consul Monaghan, Chemnitz, Germany.)

FRANCE.

THE laws of France do not require that foreign creditors shall be represented before the courts by an attorney. This procedure is not alone superfluous, but also dangerous, for the attorney's fees are not regulated by law when dealing with foreign creditors and can be very much in excess of that prescribed by the French law.

In France it is customary and advisable, in a case of bankruptcy, to appoint a local executor; most of these men belong to the commercial courts. These officials look after the interests of foreign creditors with a great deal of care, and, as a rule, obtain very good results. The usual method of procedure in such cases is for the foreign creditor to receive an official notification of the failure from an executor wherein he offers his services. If one has no regular representative at the place of failure, it is wise for him to accept the executor's offer and sign the power of attorney which he always incloses.

RUSSIA.

The laws in Russia pertaining to bankruptcy are very severe. A mer-

chant in Russia can be declared bankrupt if his liabilities exceed 1,500 rubles (\$772.50) and he has not the ready cash to meet the same. He can be arrested and his retention depends on the good will of his creditors. It is claimed that this law has a very good effect on the business world, for it destroys the opportunity of a certain class of business men to shirk the responsibilities which they have toward their creditors.

A creditor who enters claim against a bankrupt must deposit 75 rubles (\$38.63) for the cost of court. All foreign creditors must make claim within twelve months after date of failure, otherwise their claims are void.

In Russia the court publishes the fact of the bankruptcy, but gives no official notification to the creditors; for this reason foreign creditors know nothing of the existing conditions until it is too late.

For the above reasons it would be wise for exporters to keep a watchful eye on their outstanding debts in Russia.

ITALY.

In Italy creditors have the right to demand 6 per cent. interest on all debts not paid when due. Regularly accepted drafts which are not honored at expira-

tion can at once go to protest, but must pass through a notary's hands. The court executor can perform this duty, but the law demands several days' grace before the belongings of the debtor can be sold.

All business men in Italy are compelled to keep two account books; and each and every transaction must be entered in each of these books. When a page is full a Government official comes and examines the same, and, if he finds it in order, stamps, numbers, and signs it.

In case a merchant is pressed for payment by a creditor and he can prove by his account book that his resources are greater than his liabilities, the court will grant the merchant six months' time to settle up with his creditors. During these six months his business is watched over by an official from the court and a representative of the creditor or creditors.

In the case of bankruptcy, creditors must send in their claims to the official who has charge of the case. All claims of foreign creditors must be attested to in order to show correctness of the creditor's demands.

NORWAY AND SWEDEN.

In these countries the only thing for a creditor to do is to send in his claims and make sure that the same are recognized. After this has been done he has the right to refuse to accept the propositions offered by the bankrupt, and can insist upon court proceedings, in case he believes the bankruptcy was brought about with dishonest intentions.

DON'T GO GROPING AROUND IN THE DARK



BUT BRIGHTEN
UP YOUR
STORE
AND
FACTORY
BY USING

LUXFER
SIDEWALK
PRISMS

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LUXFER PRISM CO.,
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Look Out!

When you buy Green just examine the label and be sure that it reads and looks like this:



That's your safe-guard. It means that the purest, most economical and durable paint in the world is

LUCAS
Imperial French Green

JOHN LUCAS & CO.

PHILADELPHIA

NEW YORK

CHICAGO

McArthur, Corneille & Co., Montreal.

STOVES AND TINWARE.

Specifications for Tin Roofing.

A WRITER in the Metal Worker gives the following practical advice regarding tin roofing:

Most of the leaky tin roofs I find to have given way at the seam. You may examine a leaky roof where good tin has been used originally, and you will find that the sheet generally is in good condition, but all along the seam, on top, and on the edge you will find a number of little rusty spots, and in using a sharp point you can push it through in many places. Some will say the rosin was not properly scraped off after soldering. This is nonsense. The fact of the matter is, that most of the tin roofs are practically ruined when the tinner gets off the job for the reason that he used "plenty of rosin, used a hot iron and soaked well."

In soldering with rosin on top of the seam with a hot iron, it is true that by using plenty of rosin the seam is being soaked well, but on account of the great heat to which the rosin is subjected it will carry the solder and the original coating of the tin off the seam, leaving that part over which the iron was carried practically bare with a thin skimmed coat, having on it neither solder nor much of the original coating. Tiny specks of rosin will remain on that part which can hardly be scraped off because they can hardly be seen. In course of time, however, these specks of rosin will crack off and take the tin with them.

I have seen the very best of tin put on by the best workmen out of different shops in exactly the same manner as described above, and because of this experience I have changed my way of putting on tin roofing, and the results have been very gratifying, and in mentioning this to others who have had practical experience, I have found that their experience has been the same as mine. Of course, men who sit at the desk and let other men look after the work will never gain any real knowledge for themselves, but will always stick to the old theory of their forefathers.

The way to put on a tin roof is to keep the rosin away as far as possible. Take muriatic acid, well dissolved with zinc; use 55 per cent. water and 45 per cent. acid; use this solution, solder well

and wipe off with a rag when done. In soldering with this solution, a little steam is created sufficient to chill the solder as the soldering iron moves along which prevents the solder from running off the seam. The movement of the soldering iron ought not to be too slow, especially when the iron is very hot.

Since using this method I have yet to hear the first complaint of any tin giving way in an unreasonably short time. I would challenge any one to prove to me that I am wrong.

Stoves and Fishing.

Peter B. Acker, the newly elected president of the National Association of Stove Manufacturers, is an ardent disciple of Isaak Walton, and a firm believer in the benefits to a business man of going a-fishing occasionally. Therefore, it was only natural that he should have found a neat comparison between angling and fishing for new members when accepting the presidency. He said: "I feel greatly surprised and greatly honored in your action in making me president of this splendid association. I shall do all I possibly can for the association and for the increase of its membership."

"I shall endeavor to make some long casts during my term of office, and trust you will all stand ready with your landing nets. Again, I thank you for the great honor conferred upon me."—Metal Worker.

The Canada Steel Range.

The Moffat Stove Co., Limited, Weston, Ont., have issued a neat pamphlet giving superb illustrations of their line, the Canada steel range. This booklet is one of the most attractive received by Hardware and Metal for some time, and will prove interesting to any hardware dealers who secure a copy of it. Copies will be furnished on application.

WANTED HER MONEY BACK.

An eastern hardware dealer, who handles sporting goods, tells of having sold a pair of dumbbells which were returned some three years later, the lady in bringing them back stating that the boy for whom they were purchased had outgrown them.

Subscribe to the

OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish, Chemical and Drysaltory Trades.

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Sample for 10 cents.

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COVERT MFG. CO.

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Auto Screw Jack

Harness Snaps, Chain, Rope and Web Goods, etc.

FOR SALE BY JOBBERS AT MFRS. PRICE.

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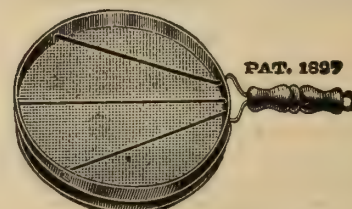


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Toilet, Hand, Electric Power
ARE THE BEST.
Highest Quality Grooming and
Sheep-Shearing Machines.

WE MAKE THEM.

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American Shearer Mfg. Co., Nashua, N.H., USA

Wiebusch & Hilger, Limited, special New York
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PAT. 1897

The FAIRGRIEVE GAS TOASTER

Retails at 25c. The only Toaster guaranteed to toast on
gas, gasoline or blue flame oil stoves without taste or smell.
Write for prices.

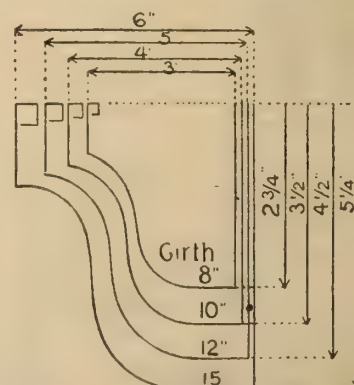
THE FAIRGRIEVE MAN'FG. CO.,
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O. G. EAVETROUGH

Conductor Pipe, Plain and Corrugated.
Conductor Elbows, Plain and Corrugated.
Hooks, Spikes and Solder.

A FULL SUPPLY OF TINSMITHS' TOOLS.



E. T. Wright & Co., Hamilton, Canada.

Have you
tried it?
Tried what?
**SELLING
MANTELS.**



This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

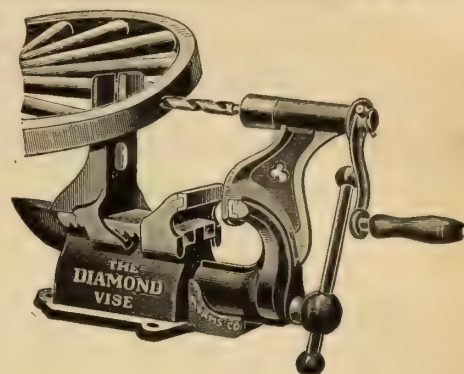
DIAMOND VISE AND DRILLING ATTACHMENT

U. S. Patent Jan. 15, '95. Canadian Patent July 22, '95



JAWS are faced with steel $\frac{3}{8}$ inch wide, 4 inches long,
firmly fastened to jaw, checked and hardened.
VISE weighs 38 pounds. DRILL weighs 13 pounds.
For Sale by Jobbers of Hardware.

Made by—
The Adams Company, Dubuque, Iowa, U.S.A.
Made by Taylor-Forbes Co., Limited, Guelph, Ont.



SEE THAT MARK

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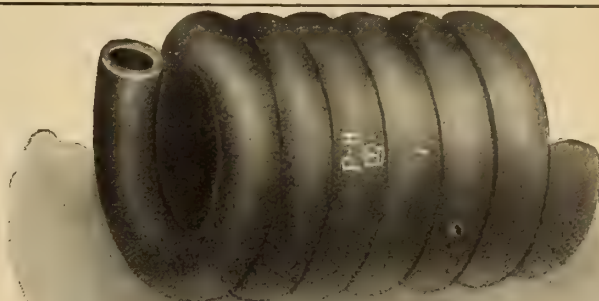


on Wrought Iron Pipe. When
that mark is there you have

The Highest Grade Made

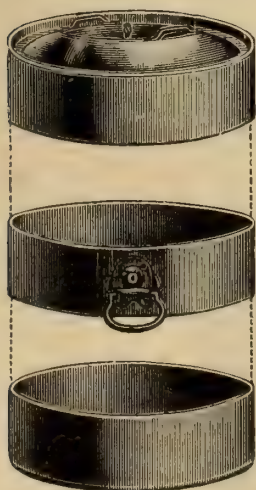
in this country. Pipe that **IS**
Pipe. The quality will be re-
membered long after the price
is forgotten.

Send for Quotations.



Page-Hersey Iron & Tube Co., Limited, Guelph, Can.

Davidson's Milk Can Trimmings and Milk Cans with broad hoop patent bottoms



IN COMPLETE
SETS.

"BROAD HOOP" Pattern
—Composed of the following:
1 Broad Hoop Bottom, 1
Cover, 1 Centre Hoop 6 in.
wide, 20 gauge, 1 Broad Top
Hoop, 1 pair Cover Handles,
1 pair Side Handles.

give great satisfaction
and are justly entitled to their
popularity.

Our **BROAD-HOOP BOTTOM** has all the
advantages of a Seamless Bottom without the
strain that spinning entails.

BOTTOMS can be sweated in with very little
solder.

BOTTOMS are concave, draining to the
centre, and are therefore easy to wash out and
will not corrode.

Top bands are shouldered and all bands have
retinned edges.

PATENT FLUSH SIDE HANDLES.

WE CAN SUPPLY BEST QUALITY TINNED IRON
AT LOWEST MARKET PRICES.



Heavy Rolled Edges make our **PATENT BOTTOMS**
doubly durable and waggon and factory floor
protectors.

The THOS. DAVIDSON MFG. CO. Limited. . . . MONTREAL.

HEATING AND PLUMBING

A Science Worthy of Respect.

NOTHING to which the energy and ingenuity of man can be devoted is worthy of greater success than the work of modern practical plumbers, and yet how few, inside as well as outside the ranks, stop to realize the beneficent character of their work and the practical blessing it confers upon humanity, through protection from disease, when successfully and satisfactorily carried out. The layman's idea that anyone having a general knowledge of pipe and fittings is competent to instal a satisfactory job of plumbing is rapidly passing away, even in remote rural districts, and the "tinker" of old has been replaced by the educated, intelligent, up-to-date, practical plumber, whose better and more scientific methods are particularly noteworthy.

Comparatively speaking, the science of plumbing is new; that is, of comparatively recent growth, so that still further development of apparatus and methods may be looked for in the future. No one can deny, however, that progress has been and is still being made. No one need be ashamed because of lack of practically satisfactory results, yet what a grand field is here presented for improvement and invention to utilize for the amelioration of mankind such knowledge as modern plumbers now possess, supplemented by that which might be gained by the presentation of papers at local and national association conventions, giving the results of the experimental researches of individual members, and by personal contact in social intercourse. What may yet be accomplished in an educational or purely business way through a freer interchange of experience by the plumbers' association as a body or by the members thereof individually is, perhaps, but fairly conceived.

Invention has profoundly changed industrial conditions, steadily falsifying all pessimistic predictions, and going hand in hand with a relative rise in wages and an improvement in the conditions of working people as a class. After having been much discussed in its relation to industry, mechanical invention has come to be recognized as beneficent, though its path to recognition has been

rough. The welfare and proper recognition of the conscientious, practical, up-to-date plumber, as inventor as well as engineer, is largely in his own keeping. Every plumber should act well his part, and, having the interest of his calling at heart, should stand by those movements that tend toward possible improvement, in any and all directions.

To be truly successful the plumber must be continually pushing and forging ahead, and the plumber who listens to the papers prepared by brother plumbers, or who reads them in a technical periodical and thereby learns what other men are doing, cannot help but be stimulated to improve his condition, both mentally and financially, and as sure as he makes one improvement he will want he makes another. He has acquired every essential for the best and most successful operations, and his example will be of immeasurable value to fellow members of the craft, who will sooner or later be forced to adopt the advanced methods and practices advocated and followed by the truly modern plumber.—Plumbers' Trade Journal.

Plumbers Open Union Shop.

A feature of the Montreal plumbers' strike this week is the opening up of a co-operative plumbing concern by the officials of the Journeymen Plumbers' Union, who have been on strike since May 3. They have rented a store at 174 St. Dominique street, belonging to the Paquette estate, and will conduct a business on a small scale at first, branching out in a more pretentious manner in the future. This is said to have been the design of the union for some time, and is now being put to a practical test. Two ex-members of the union have gone into business for themselves, and are now employing union men.

Otherwise the situation is unchanged, as far as the relations between the union and the master plumbers are concerned. However, there seems to be more of a desire on the part of both organizations to do a little in the way of arbitration, but as yet nothing has been done. The masters are still determined that the present demands are beyond consideration altogether, and before a

settlement can take place there will have to be concessions on both sides.

Building in Montreal.

Building Inspector Chausse, of Montreal, in his annual report for 1903, states that 581 permits for new buildings were registered during 1903, representing \$3,397,741 in value, and 429 permits for repairs to the amount of \$550,992. The city erected several public buildings, among which may be mentioned fire stations, public baths, etc., the cost of which amounted to \$145,863, so that a total of \$4,094,569 for building purposes was expended during the year, against \$3,089,734 for the preceding year, thus giving an increase of \$1,004,862 over last year.

Building Notes.

An Orange hall is to be erected in Marmora, Ont.

Additions are being made to the Guelph Collegiate Institute.

The Galt Art Metal Co., Galt, Ont., are erecting a new factory.

Mr. McEachern is erecting a brick residence in Wellesley, Ont.

The Galt Blast Furnace Co., Galt., are erecting a new foundry.

Mr. McLaren, Winnipeg, will build a residence on Portage avenue.

The Portland Methodist church, St. John, N. B., has been started.

A new wing is to be added to the bonding warehouse in Toronto.

A new collegiate institute is to be erected in Galt, Ont., at a cost of \$35,000.

A large business block is to be erected on Main street, Winnipeg, to cost \$50,000.

Ottawa is erecting a building at Lansdowne Park, for the fat stock show.

Plans are being prepared for the new Normal school in Winnipeg, to cost \$50,000.

J. A. Thibodeau, Pembroke, Ont., is going to erect a business block on Pembroke street.

Extensive additions are to be made to the Home for Incurables, Portage la Prairie, Man.

WINDOW GLASS

Large stocks are now arriving and assortments are well maintained. Glass is in splendid condition. Send us your specification now, and have your order filled before assortments are depleted. The brand is good and the price is right.

A. Ramsay & Son,
MONTREAL.

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GLASS
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GILLETT'S LYE

—IS GOOD FOR—

Brewers and Bottlers

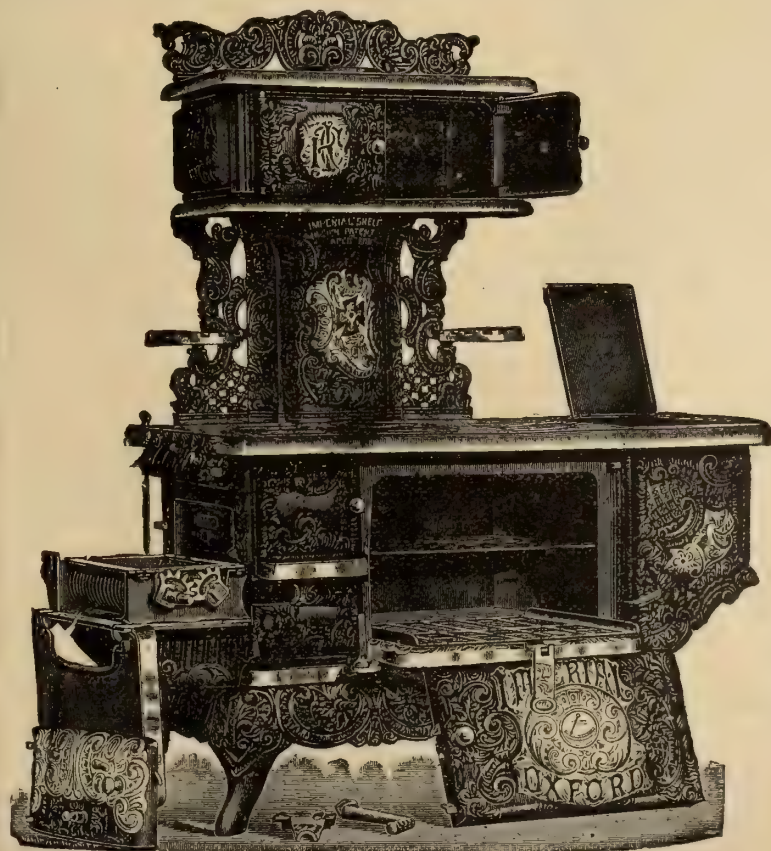
For Washing Barrels, Bottles, Etc.

Sell Gillett's Lye

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Brewers and Bottlers

E. W. GILLETT COMPANY LIMITED
TORONTO



We want you to be agent for the Imperial Oxford Range

in your district. You will find it a profitable proposition. The Imperial Oxford agent always does the range trade of his town. It is the stove that does it. The best cooker on the market, and so many people know it as such.

WRITE FOR PARTICULARS.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., LIMITED
CALGARY, ALTA.

"REMANIT"

**Saves more Heat
by 20 to 30 per
cent. than any
Pipe Covering
made.**

The next time you have a call for Pipe Covering be prepared and have on hand the best in the market—"REMANIT"—the Pipe Covering which fits both pipe and fitting, is moisture proof, does not deteriorate in use, and is the gretest non-conductor of heat of any pipe covering on the market. Dealers make money and satisfied users in handling this superior Pipe Covering.

**THE JAMES MORRISON BRASS MANUFACTURING CO.,
TORONTO, ONT. LIMITED**

There is to be erected at Craigmont, a new public school, 26x40 feet.

A four-roomed schoolhouse is to be erected in Fort William, Ont., at a cost not to exceed \$10,000.

Joseph Bedall, Winnipeg, will erect a three-storey business block near the Manitoba Club.

D. McKillop is making large additions to his store on Saskatchewan avenue, Portage la Prairie.

The Government are going to build a new drill hall in Hamilton, to cost in the vicinity of \$50,000.

C. Jeffries is the contractor for a new hall for the Oddfellows on Campbell street, Portage la Prairie.

The building of the extension to St. John's church, Toronto Junction, will be proceeded with at once.

W. Durance, Hamilton, will build three brick houses on Ferrie and Ferguson avenue, to cost \$3,000.

The Canadian Bank of Commerce is erecting a large new building on Saskatchewan avenue, Portage la Prairie.

S. J. Simmons is the contractor for a large new block on Saskatchewan avenue, Portage la Prairie, for J. F. Robb.

A dispatch from Galt, Ont., says that a Toronto corporation have undertaken the erection of from 40 to 60 dwellings in Galt.

The Plow Co., of Paris, Ont., are about to add to their plant by the erection of a warehouse at the north end of the building.

McCullough & McPherson are erecting a new building for the Daily Graphic office on Saskatchewan avenue, Portage la Prairie. Sydney Bros. are the contractors.

Building Permits.

MONTREAL.

E. D. Barrette, 265 Wolfe street, two houses, to cost \$6,500.

D. Pepin, 857 St. Dominique street, two houses, to cost \$4,000.

R. A. Ross, Crescent street, to erect one residence, to cost \$10,000.

Joseph Bernier, Fullerm street, to erect one house, to cost \$4,500.

Dr. F. Buller, 128 Stanley street, to erect one house, to cost \$10,000.

M. M. Chalup, to erect on Chambard street, one house, to cost \$18,000.

L. Mendel, 618 St. Lawrence street, to erect a building to cost \$1,100.

Max Usher, alteration on a dwelling on St. Urbain street, to cost \$1,500.

Estate Masson, alterations at 2,254 St. Catherine street, on a dwelling to cost \$3,000.

Montreal Quilting Co., to erect on Guy street, near Notre Dame, one factory, to cost \$15,000.

Estate R. T. Godfrey, 2,278 St. Catherine street, alteration on one building, to cost \$1,020.

M. A. Weir, Cote de Neiges, one house to cost \$4,000 and two houses, to cost each \$3,000.

Toilet Laundry Co., of Guy street, to erect at 411 Richmond street, one building, to cost \$5,500.

Boston Shoe Store, corner St. Catherine and Mansfield streets, alteration on one store, to cost \$2,500.

Trustees of the Maternity Hospital, corner Prince Arthur and St. Urbain street, one hospital, to cost \$65,000.

LONDON.

H. Paisley, brick veneer cottage on Duchess avenue and Edward street.

A. E. Tavlör, storey and half brick residence on north side of Pall Mall street.

J. S. Moore, two-storey brick veneer dwelling on Oxford and Wellington streets.

OTTAWA.

W. G. Charleson, solid brick store, south side of Rideau street, \$2,000.

St. Germain and Black, solid brick dwelling, west side of Cartier street, \$2,600.

Evangeline Booth, solid brick Salvation Army citadel, south side of Slater street, \$9,000.

C. A. E. Harriss, brick veneered stable, south side of McKay street, probable cost \$3,000.

TORONTO.

S. Crane, dwelling, Walmer road, \$4,500.

D. H. Reid, residence, Hampton avenue, \$1,500.

T. J. Burns, residence on Brock avenue, \$1,650.

F. L. Hubbard, dwelling on Bathurst street, \$1,000.

Dr. Reeve, dwelling, Bloor and Park road, \$13,000.

Charles Mould & Co., Margueretta street, \$7,200.

E. Dalby, two dwellings on Augusta avenue, \$3,800.

H. George, pair dwellings, West Lodge avenue, \$3,000.

St. Michael's Hospital, laundry in the hospital, \$6,500.

J. T. Hudson, dwelling, Palmerston boulevard, \$4,000.

Menzie Mfg. Co., brick factory on Pacific avenue, \$9,000.

W. B. Mitchell, dwelling, Roxborough street, east, \$2,500.

W. Burton, dwelling, Roxborough street, west, \$4,800.

James Hislop, dwelling, Roxborough street, east, \$2,600.

H. H. Dunning, dwelling, Roxborough street, west, \$2,200.

G. T. Clarkson, residence, 377 Brunswick avenue, \$6,000.

F. C. Keene, pair dwellings on Dovercourt road, \$4,000.

J. A. Pinkerton, two dwellings, 99 Victor avenue, \$1,900.

Dr. John Hoskin, a mission house on Buchanan street, \$5,900.

Mrs. Anxworthy, dwelling, Queen street, near Jamieson avenue, \$10,000.

Consumers' Gas Co., machine shop, on Front street, near Parliament street, \$15,000.

Wesley Bulmer, cement dwelling, Birtle avenue, \$2,100; also pair dwellings on Dundas street, \$3,000.

CHARLES BAYNES, England.
 MAKER OF THE KNUZDEN BROOK, BLACKBURN,
"CLICK-CLACK"
 HACK SAW BLADES.
 In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited

HANOVER, ONTARIO.

Manufacturers of the Celebrated **"Saugeen Brand"** OF PORTLAND CEMENT.

Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables—Emlyn Engineering Works
 "Machinery," Newport. NEWPORT, MON., ENGLAND



Will Hold Up a Shelf !

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,
 New Haven, Conn., U.S.A.

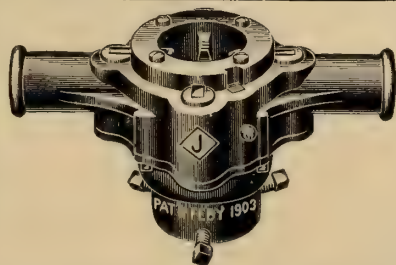
To Manufacturers' Agents

Hardware and Metal has inquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of inquirers in our various offices throughout Canada and in Great Britain without charge.

Address

Business Manager
 HARDWARE AND METAL
 Montreal and Toronto



It is a fact that one man with our **PATENT PIPE DIE** can easily do the work of two men with any other. Send us your address and we will explain HOW and WHY.

A. B. JARDINE & CO.

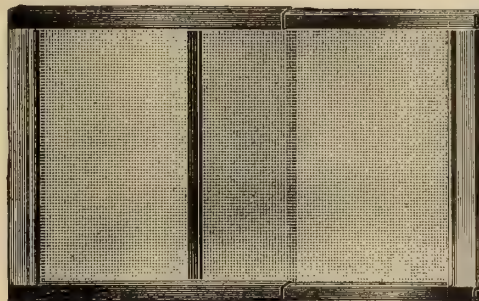
Mfrs. TAPS and DIES.
 HESPELER, ONT.

PIG IRON

FOR
 IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.



Canadian Patent, March 17, 1903.

U. S. Patent, January 26, 1904.



They cost

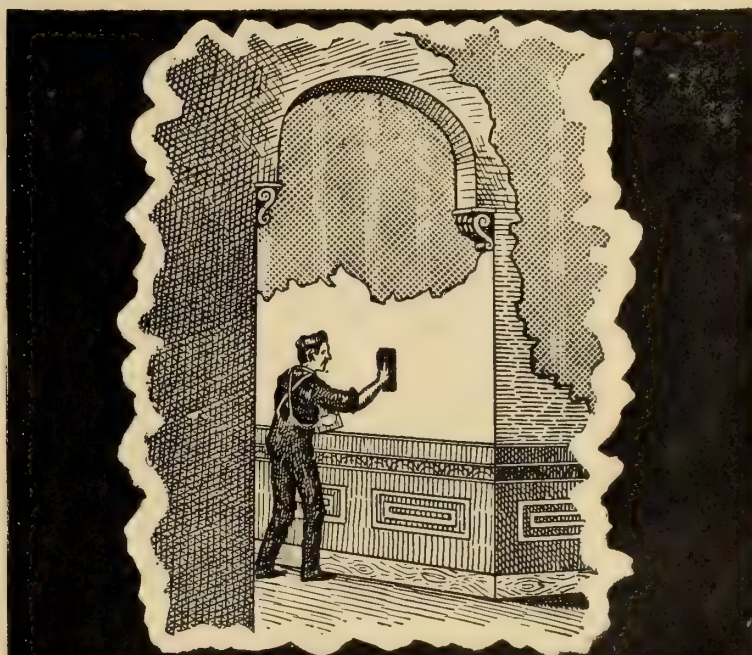
**No More
 Than Wood**

Then why use the poor, defective, troublesome wood screen ?

A practical man sees the difference in a moment.

Send for description.

G. M. Cutts & Co., Makers
 Toronto Junction.



Pedlar's "Perfect" Metal Lath

CHEAP AS WOOD

Delivered to any railway station in Canada, for 10c. per square yard. Discount to dealers. Circulars and samples on request.

Pedlar People, Oshawa, Can.,
 or 767 Craig St., Montreal, Que.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE Oshawa manufacturing business of the Frost & Wood Co. will be removed to Smith's Falls. Lack of room in the Smith's Falls plant has prevented this being done before, but now since the enlarging of the moulding shop and the providing of other accommodations, the Oshawa business can be carried on in Smith's Falls.

* * *

The seven storey brick building of B. Ledoux & Co., carriage builders, Montreal, has been destroyed by fire, besides the contents. The loss is estimated at \$300,000. The machinery was of the most modern type, and hundreds of valuable vehicles of great value were stored in the building.

* * *

The Canadian Iron Foundry Co. (formerly the St. Thomas Car Wheel Co.), St. Thomas, Ont., have promised that if they were granted exemption of taxation and water at manufacturers' rates by the city, they would commence the erection of new buildings at once. The buildings they propose to erect would cost \$25,000, and they propose to turn out ten cars per day, employing from 250 to 300 hands.

* * *

The final location of the James Bay Railway will be very shortly decided, and within a month or so it is expected that grading will be started at several points along the line. Mr. Wm. Mackenzie, of Mackenzie & Mann, who are backing the James Bay project, says that the road will be built, whatever the action of the C. P. R. may be.

* * *

The Western Manufacturing Co., at present located at Indian Head, who manufacture various agricultural implements, besides office and store fixtures, are requesting the City of Regina to grant them assistance, in order that they may be able to remove from Indian Head to Regina. The capital of the company is \$50,000, of which \$23,300 is paid up.

* * *

The new factory of the Winnipeg Ceiling and Roofing Co., Winnipeg, at Fort Rouge will soon be in operation. This

firm intend to manufacture all kinds of metal ceilings, corrugated iron roofings, sidings, cornices, skylights and fireproof windows. W. J. McMartin, the manager, states that everything will be in readiness by June 1.

Notes.

A Presbyterian church is being erected four miles north of Yarmouth Centre, Ont. N. R. Darrach, St. Thomas, is architect.

The planing mill of the J. & J. Kerr Co., Ltd., Petrolia, Ont., has been partially destroyed by fire.

The site of the Petrie factory in Hamilton has been chosen, and work will be commenced at once.

The London Tinplate Co., London, Ont., have decided to move to Hamilton, the reason given being that power would cost less in Hamilton than in London. The company employ thirty-eight hands.

Fire has damaged the building and stock of Chadwick Bros., brass manufacturers, Hamilton, Ont., to the extent of \$8,000. The pattern room was considerably damaged by water. The brass moulding department escaped injury.

Fort Frances, Rainy River District, Ont., is to have a new industry, promoted by A. E. Cline and R. V. H. Keating, who intend to form a local company. The industry is to be the making of concrete cement building blocks.

The sawmill of Mr. Haslam, Nanaimo, Vancouver Island, together with the valuable machinery installed, has been destroyed by fire. The loss is estimated at \$65,000. The shingle mill adjoining was also damaged.

Czerwinski & Grant, box manufacturers, Winnipeg, are preparing plans for the erection of a new factory on Logan avenue. The new factory will be very much larger than the present factory on Lombard street. It will be of stone and brick.

The Standard Varnish Works, of New York, have made an application to the City of Toronto to establish a varnish

factory on the Leak property, north of the Dundas bridges, and the Board of Control have adopted the recommendation of the City Engineer that the request be granted.

Companies Incorporated.

Thompson, Ltd., Sault Ste. Marie, capital \$40,000; purpose, to manufacture and deal in merchandise.

The Carlyle Construction Co., Ltd., Toronto, capital \$100,000; purpose, to carry on the business of a contractor.

Sudbury Brick Co., Ltd., Sudbury, Ont., capital \$20,000; purpose, to manufacture and sell brick, tile and other clay products.

The Stratford Carriage Co., Ltd., Stratford, Ont., capital \$75,000; purpose, to manufacture carriages and vehicles.

The Armeta Weighing Machine Co., Ltd., Toronto, capital \$100,000; purpose, to manufacture and sell automatic weighing machines.

The South Essex Oil and Gas Co., Ltd., Leamington, Ont., capital \$500,000; purpose, to carry on the operations of a mining, milline, reduction and development company.

The St. Anthony Gold Mining Co., Ltd., Ignace, Ont., capital \$1,000,000; purpose, to carry on in all its branches the operations of a mining, milling, reduction and development company.

The Ursa Major Co., Ltd., Toronto, capital \$1,000,000; purpose, to carry on in all its branches the operations of mining, milling, reduction and development company.

The Empire College of Ophthalmology, Ltd., Toronto, capital \$40,000; purpose, to establish and maintain a college for the teaching of chemistry, physics, anatomy, physiology of the eye, optometrics, mathematics and mechanics.

The Berlin Gasoline Engine and Thresher Co., Ltd., Berlin, Ont., capital \$100,000; purpose, to manufacture and deal in gasoline engines, threshers and other machinery, some in the course of construction and others being repaired.

Licenses Granted.

The John Murphy Co., Ltd., incorporated under the laws of the Dominion, to carry on business in Ontario.

The Pacific Coal and Oil Co., Ltd., incorporated under laws of the Dominion, to carry on business in Ontario.

The Detroit and Parry Sound Mining Co., Ltd., incorporated in the United States, to carry on their business in Ontario with a capital of \$50,000.



Cut showing cornice work supplied the Union Bank, Winchester, Ont., by the Metal Shingle & Siding Co., Limited, Preston, Ont.

Do You Know?

That we have an up-to-date Cornice Department in connection with our business; in fact we employ several mechanics who are specialists in cornice work and we are prepared to make anything which can be constructed in the **Sheet Metal Building Line**. Estimates supplied from architects' drawings, prints, or rough sketches.

Give our Cornice Department a trial and see what we can do for you. All work guaranteed.

**The Metal Shingle
& Siding Co., Limited**
Preston, Ont.

Representatives: CLARE & BROCKEST, Winnipeg.
ELLIS & GROGAN, Calgary.

HORSE CLIPPER
MAKERS



TO HIS MAJESTY
THE KING.

**The BARTON GILLETTE HORSE
CLIPPING and SHEEP SHEARING CO.,**
103 NEW OXFORD ST., LONDON, W.C. Limited
SOMETHING ENTIRELY NEW IN HAND CLIPPERS.

THE CORONATION.

Fitted with our Patent Ball Race which has enabled us to secure all prizes and medals awarded for Horse Clipping and Sheep Shearing Machinery.

USED EXCLUSIVELY
IN THE
ROYAL STABLES.



THE CORONATION.

The plates are considerably wider than those supplied with any other Clipper, thus enabling the user to do more work. PATENT ANTI-FRictional LEVERS and BEST FINISH.

USED EXCLUSIVELY
IN THE
ROYAL STABLES.

AWARDED 2 FIRST PRIZES ROYAL SHOW OF ENGLAND BEATING ALL COMERS, AND 12 MEDALS AT VARIOUS AGRICULTURAL SHOWS.

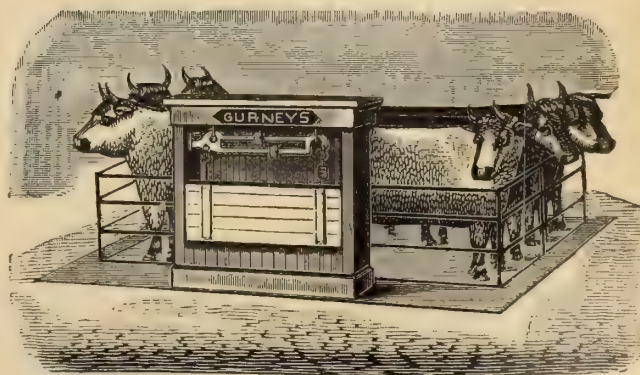
Send for Illustrated Catalogue and Terms. Agents wanted everywhere.

THE BARTON GILLETTE POWER CLIPPERS USED EXCLUSIVELY IN THE STABLES OF:—H.M. THE KING, H.R.H. THE PRINCE OF WALES, H.R.H. THE DUKE OF CONNAUGHT, AND ALL THE LEADING NOBILITY AND GENTRY.

THE GURNEY STANDARD SCALES

Absolutely Accurate and Reliable. The Best of Material and Workmanship. Recognized throughout Canada as

"THE STANDARD"



We make scales of every description. Established 1856.
Send for catalogue and printed matter.

The Gurney Scale Co., Hamilton, Ont.

Eastern Warehouse:

Western Warehouse:

The Gurney-Massey Co., Limited The Gurney Stove and Range Co.
Montreal, Que. Winnipeg, Man. Limited,

HOW TO LAY A CEMENT FLOOR.

THE following procedure for laying a cement floor is given by a correspondent in an exchange: In laying a cement floor, first determine your level and fall. You can either fall to middle or one end. We suppose you put fall to one end farthest from kennel. Excavate 4 inches from level, allow $2\frac{1}{2}$ inches for fall. This will keep it dry. Then get some old brickstone or rubble, throw in, and break over in their bed to $2\frac{1}{2}$ inches in depth with hammer. This will make solid bottom as well as key for concrete. Then get your gravel, ground slag, or granite chippings, whichever is the cheapest in your locality; put three barrows of one of these and one barrow of sand to one bag of cement; turn over twice dry, and then wet up, and turn once more. If you are going to put railings round, put boards on edge, about 4 or 5 inches deep, to hold up rubble and concrete. These would be best put to finished face of concrete, and they will act as screeds; put in stakes to hold boards in position. You will now be ready for laying concrete, which should average $1\frac{1}{2}$ inches in depth. If you have not boards up, lay a screed down either side to the level of finished floor about 6 inches wide. This will be a guide for your lath, which should be about 4 feet long. Fill in the middle with concrete, and work off with lath to level of screed, to insure a true face. Allow about three hours for it to stiffen, then face up nice and smooth with a plasterer's steel float. Do not lay concrete on soil or clay, or it will bend and crack before long; and if the air is frosty, cover for a day or two with bags or matting, or it will skin, and ruin the face. It will take about 1 carload of brick rubbish, 6 barrows of gravel, 2 of sand, and 2 bags of cement.

CEMENT WORKS NEAR VICTORIA.

Work has begun on the cement works on Saanich Arm, B. C. R. P. Butchart, of Victoria, at the head of the company of eastern capitalists, who has had charge of all the arrangements, has begun operations on Tod Creek, where the works are to be established. He has decided upon the plans for the work and will carry them out as described in the Times some weeks ago. Provision will be made for the extension of the works as the demand for the commodity increases. Mr. Butchart has taken up his residence in this city on Rockland avenue. He has brought out from the east his automobile, a high-grade one, and will be enabled to keep a watch on the works as they progress. H. A. Ross, of Toronto, the secretary-treas-

urer of the company, is also in the city. It will probably be eight or nine months before the company is in a position to begin the manufacture of cement. The complete equipment will be put in under the direct management of Mr. Butchart, no contract being awarded for it.

NEW ROOFING CO.

The Winnipeg Ceiling and Roofing Co. have nearly completed their new factory in Fort Rouge at the foot of Scott street. The ground floor will occupy a space of 50x220 and already some very heavy machinery has been installed in this department. The second storey of the building will be used as the cornice shop. The boiler and engine room is located at the rear of the factory. The new concern intends manufacturing all kinds of metal ceilings, corrugated iron roofings, sidings, cornices, skylights, fire-proof windows, etc. W. J. McMartin, the manager, states that everything will be in readiness by June 1, when a full gang of skilled mechanics will be started to work. A neat and attractive catalogue is being published which may be had on application.

WHERE BEST ASPHALT IS OBTAINED.

The best asphalt in the world is obtained in Venezuela from what is called Bermudez Lake. This "lake" is not a body of water, but a mass of brown, plastic mineral substance, somewhat less yielding than putty. It has an area of about one thousand acres. Its surface will sustain men and mules and vehicles of various kinds engaged in the work of digging it and shipping it away. This steady removal does not lessen the available quantity, as, slowly but steadily, this plastic mineral matter exudes from the bosom of the earth into the great natural Bermudez basin.

"The Venezuelan asphalt is the purest known. But it excels only in very slight degree that found in a similar lake in the Island of Trinidad, which lies off the coast of Venezuela. Innumerable asphalt deposits are found scattered over the globe, many of them in the United States, but all of them are far inferior in quality to those of Venezuela and Trinidad. Those two "lakes" constitute the world's sole sources of the highest grade asphaltum for paving and other needs.

"Trinidad Lake is not so great in extent as Bermudez Lake, but it is on high ground, and the overflow of this huge plastic mineral spring has, through

the centuries, overlaid with thick deposits of asphalt large areas of land retreating toward the sea."—Pearson's.

ELECTRICITY IN CHINA.

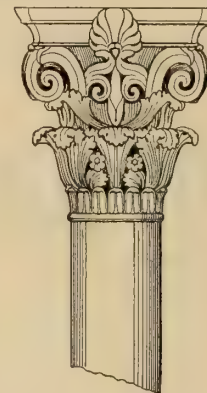
A contract is expected to be let shortly for the purpose of lighting the British settlement in Tientsin, China. There are to be two 100 kw generators direct connected to 13x14 in. engines. For the streets 250 arc lamps will be used.

GENUINE
PRATTS ASTRAL
LAMP OIL

Sold in all countries and recognized as the highest grade oil manufactured.

WHOLESALE ONLY.

THE QUEEN CITY OIL COMPANY, Limited,
TORONTO, ONT.



Metal Sash Bars, Capitals and Bases for Plate Glass Windows.

Various Finishes.
Write for Prices.

Dennis Wire & Iron Co.
London, Ont.

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There is money for everybody concerned in

The Ormsby Skylight

—for the hardware dealer who tenders on the job; for the man who builds.

The best skylight made.

WRITE FOR OUR PROPOSAL.

A. B. ORMSBY LIMITED,
Cor. Queen and George Streets,
TORONTO, ONT.

. . FULL STOCK . .

Salt Glazed Vitrified

Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.

PORTLAND CEMENTS

Best German, Belgian and English
Brands.

FIRE BRICKS
FIRE CLAY
FLUE LININGS
DRAIN PIPES
HARD WALL PLASTER
CALCINED PLASTER
WHEELBARROWS
MORTAR STAINS.

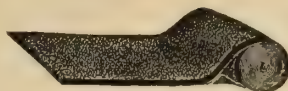
A Full Stock of Builders' and Con-
tractors' Supplies.

W. McNALLY & CO.

40 to 52 McGill St (Cor. Wellington St.)
MONTREAL.

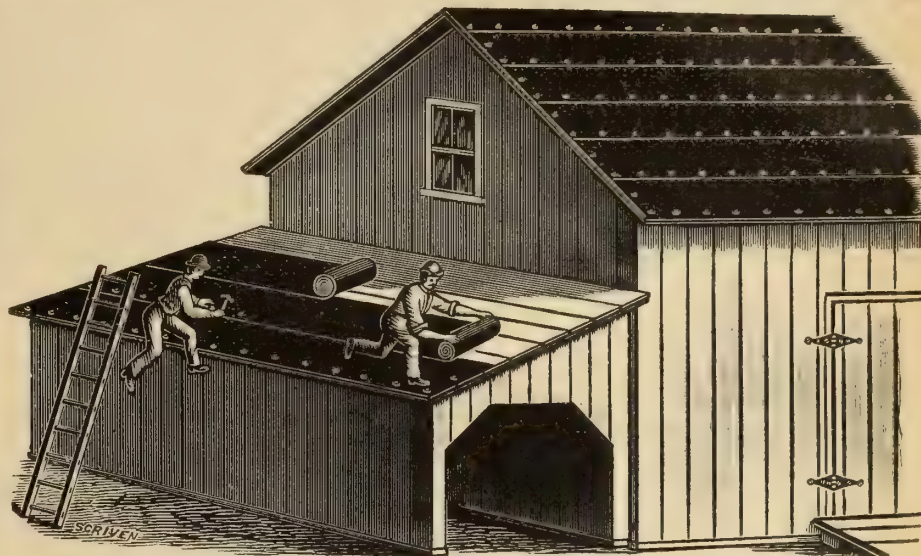
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Permanent, Economical,
Handsome.

**Arrow Brand Asphalt Ready Roofing.**

Comes in rolls, ready to lay, with nails and cement.
All ready covered with white sea gravel. No further attention after laid

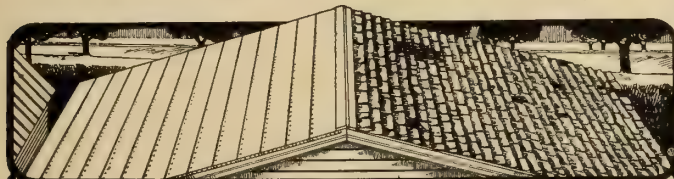
A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sun, Frost, Water, Fumes DO NOT affect it. Write to-day for agency.

**USE MICA ROOFING**

For Flat or Steep Roofs. It is Waterproof,
Fireproof, quickly and very easily laid, and
cheaper than other roofing.

HAMILTON MICA ROOFING CO.,

60 Catherine Street North, - - - HAMILTON, CANADA.



CONSTRUCTION vs. DESTRUCTION.
CARE vs. CARELESSNESS.
BEST MATERIAL vs. POOR MATERIAL.
REX FLINTKOTE ROOFING vs. ALL OTHER ROOFING.

REX Flintkote Roofing
TRADE MARK

The above tells the whole story, and means to the dealer a quick-selling, business-bringing roofing vs. the ordinary kind that never sells, because people don't want it, and when they are persuaded to try it never come back again. If you want satisfied customers for roofing, you should write us to-day about Rex Flintkote Roofing.

J. A. & W. BIRD & CO., 49 India Street, Boston, Mass.

**CHEESE PRESS SCREWS,
JACK SCREWS,
MORTISE MACHINES**

- AND -

GENERAL CAST HARDWARE.**THE H. R. IVES CO., MONTREAL.**

LIMITED.

ATKINS HIGH-GRADE, CROSS-CUT SAWS

OUR VICTOR, TUTTLE TOOTH AND SEGMENT GROUND SAWS ARE THE FAVORITES IN THE CAMPS



E. C. ATKINS & CO.,
INCORPORATED.

Factories and Home Office: INDIANAPOLIS, IND., U.S.A.

C. D. TEN EYCK, Sales Agent-for Canada. Toronto Office; 30 Front St. East. Tel. Main 1896.

LEADING MANUFACTURERS OF HIGH-GRADE, CROSS-CUT, HAND, BAND,
CIRCULAR, HACK, BACK, WOOD AND SMALL SAWS OF ALL KINDS

Write for Catalogue and Prices

BEAMS CHANNELS ANGLES PLATES

1,500 TONS FOR SALE

All of this material in lengths from 40 to 60 feet.

We can ship promptly, and should be pleased to receive your order.

Prices and stock lists on application.

STEEL FRAME BUILDINGS and ROOF TRUSSES.

Also Steel Bridges for Railways and Highways.

THE HAMILTON BRIDGE WORKS COMPANY

LIMITED

Long Distance Telephone, Hamilton 630.

HAMILTON, CANADA.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt. Less than this quantity 3c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl.	9 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators Pure	4 75
Monarch	5 00
Decorators Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs.	4 75	
No. 1, 560 lb. casks, per cwt	4 00	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 50
Pure, kegs.	4 75
No. 1, casks	4 25
No. 1, kegs.	4 50

PREPARED PAINTS.

In 1, ½ and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle"	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor"	1 25
Sterling House Paint	1 20
"Floor"	1 10
National	1 05

PATTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 10
Bladders in kegs, boxes or loose	1 85
25-lb. tins.	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 10	1 25
Furniture, extra	0 90	1 00
"No. 1	1 35	1 50
Hard oil finish	1 60	1 70
Light oil finish	1 75	2 00
Damar	2 30	2 40
Shellac, white	2 40	2 50
"orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
"black japan	1 10	1 20
No. 1	0 85	0 90
Elastilite varnish, 1 gal. can.	2 00	
Granitine floor finish, per gal.	2 75	
Maple Leaf coach enamel, size 1, \$1.20; size 2, 70c; size 3, 40c. each		
Sherwin-Williams' kopal varnish, assorted case, from 1 gal., \$2.50.		

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatin		
Strip	0 18	0 20
Coopers	0 19	0 20
Hutner		
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Cape Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 40 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 5 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 10 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

per lb.

Best thick brown or grey felt wads, in ½-lb. bags	80 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8	0 90
5 and 6	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8	1 65
5 and 6	1 90

ADZES.

Discount 20 per cent.	
ANVILS.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

AXES.

Chopping Axes	
Single bit, per doz.	7 00 10 00
Double bit, " "	10 00 18 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters' Axes	5 50 6 00
Boys' Axes	6 25 7 00
Splitting Axes	7 00 12 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys' handled	5 75
"hunters"	5 25

AXLE GREASE

Ordinary, per gross	6 00 7 00
Best quality	10 00 12 00

BELLS.

Hand.

Brass, 60 per cent.	
Nickel, 55 per cent.	

American make, discount 63½ per cent.

Canadian, discount 45 and 50 per cent.

DOOR.

Gongs, Sargent's	5 50 8 00
"Peterboro", discount 50 and 10 per cent. off new list.	

FARM.

American, each	1 25 3 00
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HOUSE.

American, per lb.	0 35 0 40
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BELLOWS.

Hand, per doz.	3 35 4 75
Moulders, per doz.	7 50 10 00
Blacksmiths', discount 40 per cent.	

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	

No. 1, not wider than 6 in., 60, 10 and 10 per cent.

Agricultural, not wider than 4 in., 75 per cent.

BITS.

Auger.

Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	

Jennings' Gen., net list.

CAR.

Gilmour's, 47½ per cent.	
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EXPANSIVE.

Clark's, 40 per cent.	
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GIMLET.

Clark's, per doz	0 65 0 90
Diamond, Shell, per doz	1 00 1 50
Nail and Spike, per gross	2 25 5 20

BLIND AND RED STAPLES.

All sizes, per lb.	0 07½ 0 12
--------------------	------------

BOLTS AND NUTS

Per cent.

Carriage Bolts, common (\$1 list)	
" 3-16 and ½	60
" 3-16 and ½	55 and 5
" 7-16 and up	55
" full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ½ and less	60
Machine Bolts, 7-16 and up	55 and 5
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bed Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4½c. per lb. off.	
Stove Rods per lb., ½ to 6c.	

BOOT CALKS.

Small and medium, ball	per M. 4 25
Small heel	4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.	
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BUTCHERS' CLEAVERS.

German	per doz. 6 00	9 00
American	" 12 00	18 00

BUTCHER KNIVES.

Bailey's	per doz. 0 60	6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	85
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Ready roofing, 2-ply, not under 45 lb.

per roll 0 90

Ready roofing, 3-ply, not under 65 lb.

per roll 1 15

Carpet Felt, per ton 45 00

Heavy Straw Sheathing, per ton 35 00

Dry Sheathing, per roll, 400 sq. ft. 0 40

Tar " " 400 " 0 50

Dry Fibre " " 400 " 0 55

Tarred Fibre " " 400 " 0 65

O. K. & I. X. L. " " 400 " 0 70

Resin-sized " " 400 " 0 45

Oiled Sheathing " " 600 " 1 00

Oiled " " 400 " 0 70

Roof Coating, in barrels, per gal. 0 17

Roof " small packages " 0 25

Refined Tar, per barrel 5 00

Coal Tar " " 4 00

Coal Tar, less than barrels, per gal. 0 15

Roofing Pitch, per 100 lb. 1 10

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.90 for 2-inch	
---	--

BUTTS.

Wrought Brass, net revised list.

Cast Iron.

Loose Pin, discount 60 per cent.

WROUGHT STEEL.

Fast Joint, discount 65, 10 and 2½ per cent.

Loose Pin, discount 65, 10 and 2½ per cent.

Berlin Bronzed, discount 70, 70 and 5 per cent.

Gen. B ronzed, per pair 0 40 0 65

CARPET STRETCHERS.

American	per doz. 1 00	1 50
Bullard's	" " "	6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.

Plate, discount 52½ to 57½ per cent.

CATTLE LEADERS.

Nos. 32 and 33	per gross 7 50	8 50
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CHALK.

Carpenters' Colored, per gross	0 45	0 75
--------------------------------	------	------

White lump, per cwt. 0 60 0 65

Red " " 0 05 0 06

Crayon, per gross 0 14 0 18

CHISELS.

Socket, Framing and Firmer.

Broad's, discount 60 and 10 per cent.

Warnock's, discount 50 and 10 per cent.

P. S. & W. Extra, discount 60 and 10 per cent.

FOODS—STOCK.

Colonial Stock Foods, 50c. packages, per doz \$4 00

" " " 25c. pkgs. 2 00

" " " 10c. " 75

" " " 25-lb. pail, each 1 30

Poultry Foods, 25c. packages 1 25

Cough Powders, per doz 1 25

Worm 1 25

Two Paper Mills and Three Factories Busy

making Paterson's Wire-Edged Ready Roofing, Building Papers and Roofing Felts.

Our success is due to the fact that we make the goods the people want, and our customers know their orders will be promptly and carefully filled.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.

Plain or Corrugated.

2-inch	per 100 feet	3 00
3 "	"	4 00
4 "	"	5 25
5 "	"	6 75
6 "	"	9 00

CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	per pair	0 17½
S. & D., " 5	"	0 22½
S. & D., " 6	"	0 15
Boynton pattern	"	0 20

DOOR SPRINGS.

Torrey's Rod	per doz.	1 75
Coil, 9 to 11 in.	"	0 95
English	"	2 00

DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Miller's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.

Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAVETROUGHS.

10-inch per 100 ft. | 10 00 |

ELBOWS (stovepipe.)

5 and 6-inch, common	per doz.	1 20
7-inch	"	1 35

Polished, 15c. per dozen extra.

ESCUTCHEONS.

Discount 50 and 10 per cent., new list.

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western 70 and 10 per cent. |

Arade 70 " 10 " |

Kearney & Foot 70 " 10 " |

Disston 70 " 10 " |

American 70 " 10 " |

J. Barton Smith 70 " 10 " |

McClellan 70 " 10 " |

Eagle 70 " 10 " |

Nicholson, 60 and 10 to 60, 10 and 5 " |

Royal 70 to 75 " |

Globe 70 to 75 " |

Black Diamond, 60 and 10 to 60, 10 and 5 per cent.

Jowitt's, English list, 25 to 27½ per cent.

Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50

GLASS.

Window. Box Price.

Size United Per | Star | Per | D. Diamond | Per |

Inches. 50 ft. 100 ft. 50 ft. 100 ft.

Under 26 3 80 | 5 06 |

26 to 40 4 00 | 5 44 |

41 to 50 4 50 | 6 56 |

51 to 60 4 75 | 7 50 |

61 to 70 5 00 | 8 62 |

71 to 80 5 30 | 9 38 |

81 to 90 5 75 | 10 75 |

91 to 95 6 00 | 12 30 |

96 to 100 6 25 | 15 00 |

Discount 15 per cent.

GAUGES.

Marking, Mortise, Etc.

Stanley, discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33 each | 1 65 | 2 40 |

GILLET'S POWDERED LYE.

1-case, \$3.60; 3-case, \$3.50; 5-case and over, \$3.40.

HALTERS.

Rope, ½-inch per gross | 12 00 |

Rope, ¾-inch " | 9 00 |

Rope, 1 to 1½-inch " | 14 00 |

Leather, 1-inch per doz. | 4 00 |

Leather, 1½-inch " | 5 20 |

Web " | 2 45 |

HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian

discount 25 to 27½ per cent.

Tack.

Magnetic per doz. | 1 10 | 1 20 |

Sledge.

Canadian per lb. | 0 07½ | 0 08½ |

Ball Peen.

English and Canadian, per lb. 0 22 0 25

HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00

tore door per doz. | 1 00 | 1 50 |

Fork.

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

American per doz. | 1 00 | 1 25 |

Plane.

American per gross | 3 15 | 3 75 |

Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

Steel barn door doz. pairs. | 8 00 | 10 00 |

Stearns, 4-inch " | 4 50 | 5 00 |

" 5-inch " | 6 00 | 6 50 |

Zenith " | 9 00 | 9 50 |

Lane's covered—

No. 11, 5-foot run " | 8 40 | 9 00 |

No. 11½, 10-foot run " | 10 80 | 11 50 |

No. 12, 10-foot run " | 12 60 | 13 75 |

No. 14, 15-foot run " | 21 00 | 22 50 |

Steel, covered " | 4 00 | 11 00 |

" track, 1 x 3-16 in (100 ft) " | 3 75 | 4 75 |

" 1½ x 3-16 in (100 ft) " | 4 75 | 5 75 |

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½ |

" " 5-in., " 0 06½ |

" " 6-in., " 0 06½ |

" " 8-in., " 0 05½ |

" " 10-in., " 0 05½ |

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in. per 100 lb. | 4 50 |

12 in. up " | 3 25 |

Spring, No. 20, per gro. pairs 10 50 |

HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter per doz. | 4 00 | 4 50 |

HOLLOW WARE.

Tinned cast, 35 per cent.

HOOBS.

Cast Iron.

Bird cage per doz. | 0 50 | 1 10 |

Clothes line, No. 61 " | 0 00 | 0 70 |

Harness " | 0 60 | 12 00 |

Hat and coat per gro. | 1 10 | 10 00 |

Chandelier per doz. | 0 50 | 1 00 |

Wrought Iron.

Wrought hooks and staples Canadian discount 60 per cent.

Wire.

Hat and coat, discount 60 per cent.

Belt per 1,000 | 0 60 |

Screw, bright, discount 60 per cent.

HORSE NAILS.

"C" brand, 40, 10 and 7½ per cent. off list (Oval

"M" brand, 55, per cent. (head

Countersunk, 5½ per cent.

"Monarch," 50 and 7½ per cent.

"Peerless," 50 per cent. dis.

HORSESHOES.

F.O.B. Montreal

No. 2 No. 1

and

larger smaller.

Iron Shoes.

Light, medium and heavy 3 65 | 3 90 |

Snow shoes 3 90 | 4 15 |

Steel Shoes.

XL, sizes 1 to 5 5 35 |

Light, No. 2 and larger 3 80 |

No. 1 and smaller 4 05 |

Featherweight, all sizes 0 to 4 5 35 |

Toeweight, all sizes 1 to 4 6 60 |

JAPANESE WARE.

Discount 50 per cent.

ICE PICKS.

Star per doz. | 00 | 3 25 |

KETTLES.

Brass spun 7½ per cent. discount off new list.

Copper per lb. | 0 30 | 0 50 |

American, 60 and 10 to 65 and 5 per cent.

KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,

American per gross | 0 60 |

KNOBES.

Door, japanned and N.P., per

doz. 1 50 | 2 50 |

Bronze, Berlin per doz. | 2 75 | 3 25 |

Bronze, Genuine " | 6 00 | 9 00 |

Shutter, porcelain, E. & L.

screw per gross | 1 30 | 00 |

White door knobs per doz. | 00 | 00 |

Net prices.

LAMP WICKS.

Discount, 60 per cent.

LANTERNS.

Cold Blast per doz. | 7 00 | 7 00 |

No. 3, "Wright's" " | 8 50 | 8 50 |

Ordinary, with O burner " | 4 00 | 4 00 |

Dashboard, cold blast " | 9 00 | 9 00 |

No. 0 " | 5 75 | 5 75 |

Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.

Porcelain lined per doz. | 2 20 | 5 60 |

Galvanized " | 1 87 | 3 85 |

King, wood " | 2 75 | 2 90 |

King, glass " | 4 00 | 4 50 |

All glass " | 0 50 | 0 90 |

LINE'S.

Fish per gross | 1 05 | 2 50 |

Chalk " | 1 90 | 7 40 |

LAWN MOWERS.

Woodyatt, 10½-in. wheel, 14-in. cut .. 8 50 |

Star, 9-in. 7 00 |

Daisy, 8-in. (net) 2 87½ |

Philadelphia, 7½-in. 7 00 |

Ontario, 7½-in. 15 80 |

King Edw'd, 12-in. 9 50 |

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:

10½-in. high wheel 7 50 | 10 00 |

U. M. C. NEW PRODUCTS.

The .32 Automatic Colt Pistol Cartridge is loaded with a special high power smokeless powder, giving high velocity and operating free through the mechanism of the Automatic Colt Pistol (pocket model). Those with the soft point bullet will be found desirable for sporting purposes, and those with metal case for military and target use.

RIM FIRE CARTRIDGES

The U. M. C. .22 automatic rifle (Winchester model 1903) cartridge is now ready for the market. New .22 short ungreated, 22 long ungreated, and .22 Winchester inside lubricated are inexpensive rim fire cartridges loaded with the best grade of smokeless powder. Boys are calling for these cartridges, as they can be carried loose in the pocket without the old inconvenience of the greased cartridge. They will not lead he gun.

"U. M. C. Ammunition shoots well in any gun."

THE UNION METALLIC CARTRIDGE CO.,

BRIDGEPORT, CONN.

Agency—313-15 Broadway, New York City, N.Y.

Depot—86-88 First St., San Francisco, Cal.

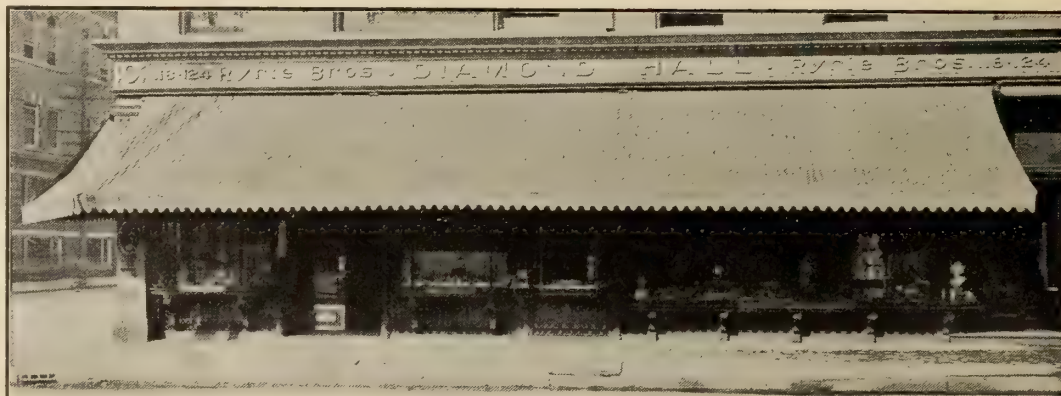
PLANE IRONS.			SAP SPOUTS.			STAPLES.			ENAMELLED WARE.		
English	per doz.	2 00	5 00	Bronzed iron with hooks	per 1,000	7 50	Galvanized	3 00	White, Princess, Turquoise, Blue and White	discount 50 per cent.	
PLIERS AND NIPPERS.				"Eureka" tinned steel, hooks	"	8 00	Plain	2 80	Diamond, Famous, Premier, discount 50 and	10 per cent.	
Button's genuine, per doz. pairs, discount				SAWS.			STOCKS AND DIES.				
37½ to 40 per cent.				Hand, Disston's, discount 12½ per cent			American discount 25 per cent.		Granite or Pearl, Imperial, Crescent, discount	50, 10 and 10 per cent.	
Button's imitation, per doz.	5 00	9 00		Crosscut, Disston's, per foot	0 35	0 55	Washita	per lb.	0 28	0 60	
German	0 60	60		S. & D., discount 35 per cent. on Nos. 2 and 3.			Hindostan	"	0 06	0 07	
PRESSED SPIKES.				Hack, complete, each	0 75	2 75	" slip	"	0 09	0 09	
Discount 20 per cent.				" frame only, each	0 50	1 25	Labrador	"	0 13	0 13	
PULLEYS.				SASH WEIGHTS.			" Axle	"	0 15	0 15	
Hothouse	per doz.	0 55	1 00	Sectional, per 100 lb.	2 00	2 25	Turkey	"	0 30	0 30	
Axle	"	0 22	0 33	Solid	1 50	1 75	Arkansas	"	1 50	1 50	
Screw	"	0 27	1 00	SASH CORD.			Water-of-Ayr	"	0 10	0 10	
Awning	"	0 35	2 50	Per lb.	0 28	0 30	Scythe	per gross	3 50	5 00	
PUMPS.				SAW SETS.			Grind, 2-in., 40 to 200 lb., per ton		25 00	28 00	
Canadian cistern	1 80	3 60		Lincoln and Whiting	4 75		" under 40 lb., "		28 00	29 00	
Canadian pitcher spout	1 40	2 10		Hand Sets, Perfect	4 00		" under 2 in. thick, "		29 00		
PUNCHES.				X-Cut Sets, "	7 50		STOVEPIPES.				
Saddler's	per doz.	1 00	1 85	SCALES.			5 and 6 inch, per 100 lengths		7 00	7 50	
Conductors	"	3 00	15 00	Gurney Standard, 40 per cent.			7 inch		7 50		
Pinners, solid, per set		0 72		Gurney Champion, 50 per cent.			ENAMELINE STOVE POLISH.				
" hollow, per inch		1 00		Burrow, Stewart & Milne—			No. 4, 3 doz. in case, net cash		4 80	8 40	
RAKES.				Imperial Standard, discount 40 per cent.			No. 6, 3 doz. in case		8 40		
Wood	per doz. net	1 20	up	Weight Beams, discount 35 per cent.			TACKS, BRADS, ETC.				
RAZORS.	per doz.			Champion Scales, discount 50 per cent.			Carpet tacks, blue	80 and 15			
Elliot's	4 00	18 00		Fairbanks standard, discount 35 per cent.			" tinned	80 and 20			
Geo. Butler's & Co.'s	4 00	18 00		" Dominion, discount 55 per cent.			" (in kegs)	40			
Boker's	7 50	11 00		" Richelieu, discount 55 per cent.			Cut tacks, blued, in dozens only	80			
" King Cutter	12 50	15 00		Warren's new Standard, discount 40 per cent.			½ weights	60			
Wade & Butcher's	3 60	10 00		" Champion, discount 50 per cent.			Swedes cut tacks, blued and tinned—	80 and 10			
Thiele & Quack's	7 00	15 00		" Weightbeams, discount 35 per cent.			In bulk	75			
Carbo Magnetic	12 00	15 00		SCREW DRIVERS.			In dozens	75			
Griffon Barber's Favorite	10 75			Sargent's	per doz.	0 65	Swedes, upholsterers', bulk	85, 12½ and 12½			
Griffon No. 65	13 00			SCREEN DOORS.			brush, blued and tinned	70			
Griffon Safety Razors	13 50			Common doors, 2 or 3 panel, walnut			Swedes, gimpp, blued, tinned and	75 and 12½			
Griffon Stropping Machines	13 50			stained, 4-in. style	per doz.	6 50	Zinc tacks	35			
Lewis Bros "Klean Cutter"	8 50	10 50		Common doors, 2 or 3 panel, yellow and			Leather carpet tacks	55			
REGISTERS.				green stained, 4-in. style	per doz.	6 75	Copper tacks	50			
Discount 40 per cent.				Common doors, 2 or 3 panel, in natural			Copper nails	52½			
RIVETS AND BURRS.				colors, oil finish	per doz.	8 75	Trunk nails, black	65 and 5			
Iron Rivets, black and tinned, discount 60 and				3-in. style 20c. per dozen less.			Trunk nails, tinned	65 and 10			
10 per cent.				SCREWS.			Clout nails, blued	65 and 5			
Geo. Butler's, discount 55 per cent.				Wood, F. H., bright and steel, discount 87½			Chair nails	35			
Extras on Iron Rivets in 1-lb. cartons, ½c.				per cent.			Patent brads	40			
per lb.				Wood, E. H., bright, dis. 82½ per cent.			Fine finishing	10			
Extras on Iron Rivets in ½-lb. cartons, 1c.				" F. H., brass, dis. 80 per cent.			Lining tacks, in papers	15			
per lb.				" F. H., bronze, dis. 75 per cent.			" in bulk	15			
Copper Rivets, with usual proportion burrs, 45				" R. H., dis. 70 per cent.			Saddle nails, in papers	15			
per cent. discount. Cartons, 1c. per lb.				Drive Screws, dis. 87½ per cent.			" in bulk	15			
extra, net.				Bench, wood	per doz.	4 00	Tufting buttons, 22 line, in doz-	60			
Copper Burrs only, discount 30 and 10 per cent.				" iron	3 25	4 00	ens only	60			
Extras on Tinned or Coppered Rivets, ½-lb.				Set, case hardened, dis. 60 per cent.			Zinc glaziers' points	5			
cartons, 1c. per lb.				Square Cap, dis. 50 and 5 per cent.			Double pointed tacks, papers	90 and 10			
RIVET SETS.				Hexagon Cap, dis. 45 per cent.			bulk	40			
Canadian, discount 35 to 37½ per cent.				SCYTHES.			Clinch and duck rivets	45			
ROPE, ETC.				Per doz. net	6 00	9 00	TAPE LINES.				
Sisal	0 11½			SCYTHE SNATHS.			English, ass skin	per doz.	2 75	5 00	
Pure Manila	0 14½			Canadian, discount 40 per cent.			English, Patent Leather	5 50	9 75		
"British" Manila	0 12			SHEARS.			Chesterman's	each	0 90	2 85	
Cotton, 3-16 inch and larger	0 21			Bailey Cutlery Co., full nickeled, discou			" steel	each	0 80	8 00	
" 5-32 inch	0 25			and 2½ per cent.			TINNERS' SHIPS.				
" ¼ inch	0 25			Bailey Cutlery, Japan Handles, discount 67½			Per doz.	3 00	15 00		
Russia Deep Sea	0 15			per cent.			Tin case and dairy, discount 75 to 75 and 10				
Jute	0 08			Seymour's, discount 50 and 10 per cent.			per cent.				
Lath Yarn, single	0 10½			SHOVELS AND SPADES.			TRAPS (steel).				
" double	0 11			Canadian, discount 45 per cent.			Game, Newhouse, discount 25 per cent.				
Sisal bed cord	per doz.	0 65		SINKS.			Game, H. & N., P. S. & W., 65 per cent.				
" 60 feet	"	0 80		Cast iron, 16 x 24	0 85		Game, steel, 72½, 75 per cent.				
" 72 feet	"	0 95		" 18 x 30	1 00		TROWELS.				
RULES.				" 18 x 36	1 40		Disston's, discount 10 per cent.				
Boxwood, discount 55 per cent.				SNAPS.			German	per doz.	4 75	6 00	
Ivory, discount 37½ to 40 per cent.				Harness, German, discount 25 per cent.			S. & D., discount 35 per cent.				
SAD IRONS.				Lock, Andrews	4 50	11 50	TWINES.				
Mrs. Potts, No. 55, polished, per set	0 80			SOLDERING IRONS.			Bag, Russian	per lb.	0 27		
" No. 50, nickel-plated, "	0 90			1, 1½-lb.	per lb.	0 37	Wrapping, cotton, 3-ply	0 24			
Common, plain	4 50			2-lb. or over	0 34		4-ply	0 27			
" plated	5 50			Iron, No. 493	per doz.	2 40	Mattress	per lb.	0 33	0 45	
SAND AND EMERY PAPER.				" No. 494	3 25	3 40	Staging	"	0 27	0 35	
E. & A. sand, discount, 40 and 5 per cent				SQUARES.			VISES.				
Emery, discount 40 per cent.				Steel, discount 60 to 60 and 5 per cent.			Wright's	0 13½			
Garnet (Rutons) 5 to 10 per cent. advance				Try and Bevel, discount 50 to 52½ per cent.			Brooks	0 12½			
on list				STAMPED WARE.			Pipe Vise, Hinge, No. 1	3 50			
				Plain, discount 75 and 12½ per cent. off re-			" No. 2	5 50			
				vised list.			Saw Vise	4 50	9 00		
				Retinned, discount 75 per cent. off revised list.			Columbia Hardware Co.				
							Blacksmith's (discount) 60 per cent.				
							" paralled (discount) 45 per cent.				

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Dominion Radiator Co.....	outside front cover						

This Awning
is 50 ft. long.
Has been used
four seasons,
and has need-
ed no repairs.

Our Awnings
are the best
made in
Canada.



THE AWNING ON THE STORE FRONT OF RYRIE BROS., THE LARGEST JEWELLERY HOUSE IN CANADA.

WE MAKE AWNINGS FOR STORE FRONTS, HOUSES AND OFFICES.

EXAMPLES OF WORK DONE IN TORONTO: AWNINGS USED BY GRAND & TOY, STATIONERS; WALKER & CO., DRY GOODS; THE WM. DAVIES CO., LIMITED, PROVISIONERS (WE DO ALL THE WORK OF THIS FIRM IN WINDOW SHADES AND AWNINGS—37 STORES); THE NASMITH CO., LIMITED, CATERERS—20 BRANCHES.

SEND FOR A QUOTATION.

WILLIAM BARTLETT & SON, 16 Adelaide St. W., Toronto

We make Roll-
erAwnings for
Store Fronts
12 feet to 100
feet, operated
from one end,
requiring
only a boy's
strength.

DOES ADVERTISING PAY?

HARDWARE AND METAL, Toronto, Ont.

TORONTO, April 25, 1904.

GENTLEMEN,—In renewing our advertising order for another year, permit us to say we have had excellent results from our quarter-column advertise-
ment in your trade newspaper, **HARDWARE AND METAL**.

This is particularly encouraging when you take into account that the line we have been advertising (mantels) is an innovation in the hardware line and
a good deal of our work has been pioneer and missionary in its character.

We read **HARDWARE AND METAL** each week, and as a subscriber of the paper almost since its inception, we have noted with great interest its
growth and development.

We have advertised in several papers, but may say we have got better results from our advertisement in **HARDWARE AND METAL** than from any other
medium. Looking back over the last few years we might say we have received on an average, at least, two inquiries per week from firms mentioning
HARDWARE AND METAL.

Wishing **HARDWARE AND METAL** continued prosperity, we beg to remain,

Yours very truly,

THE BATTY STOVE AND HARDWARE CO.,
Per Wm. Batty.

Yes, if in "Hardware and Metal."

CLASSIFIED LIST OF ADVERTISEMENTS.

Accountants and Auditors.

Barber, Henry & Co., Toronto.
 Fahey, Wm., Toronto.
 Hoskins, David, Toronto.
 Jenkins & Hardy, Toronto.
 Kidd, F. H., Toronto.
 Merson, Geo. O., Toronto.
 Williamson, T. G., Toronto.

Anvils.

Taylor-Forbes Co., Guelph, Ont.

Art Glass

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 Dundas Axe Works, Dundas, Ont.

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Canada Metal Co., Toronto.
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 Langwell's, Montreal.
 Syracuse Smelting Works, Montreal.

Barristers, Solicitors, etc.

Atwater, Duclos & Chauvin, Montreal.
 Beatty, Blackstock, Fasken & Riddell, Toronto.
 Burritt, James H., K.C., Pembroke, Ont.
 Cameron, D. O., Toronto.
 Hamilton, J. C., Toronto.
 Tupper, Phippen & Tupper, Winnipeg.
 Vidal, J. L. O., Montmagny and Quebec.

Belting, Hose, etc.

Canadian Rubber Co., Montreal and Toronto.
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 Pullman Mfg. Co., Rochester, N.Y.
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Millen, John, & Son, Montreal.

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Wright, E. T., & Co., Hamilton.

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 Taylor-Forbes Co., Guelph, Ont.

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United Factories, Toronto.

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 Lewis Bros. & Co., Montreal.
 Lewis, Rice, & Son, Toronto.
 Lufkin Rule Co., Saginaw, Mich.
 McNally, W., & Co., Montreal.
 Merrick, Anderson & Co., Winnipeg.
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 Metallic Roofing Co., Toronto.
 Newman & Sons, Birmingham.
 North Bros. Mfg. Co., Philadelphia, Pa.
 Ontario Tack Co., Hamilton, Ont.
 Ormsby, A. B., & Co., Toronto.
 Pedlar People, Oshawa, Ont.
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 Deseronto Iron Co., Deseronto, Ont.
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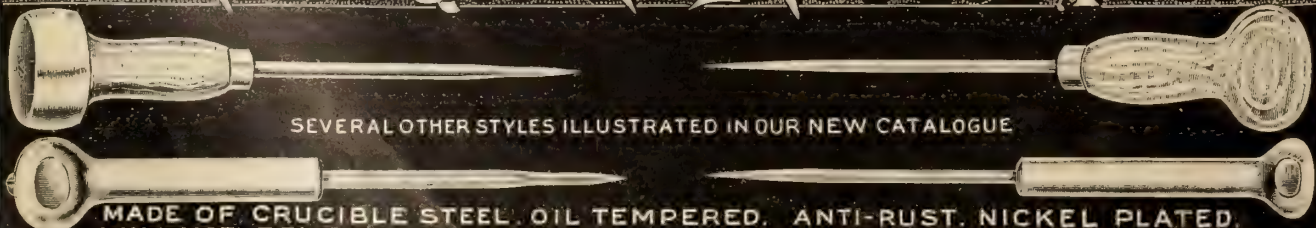
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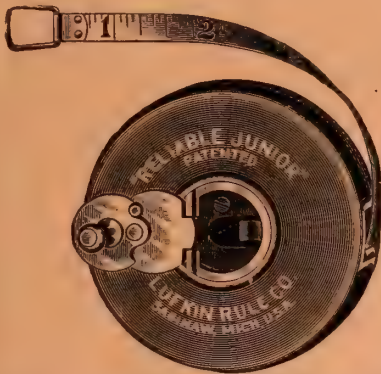
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VOL. XVI

MONTREAL AND TORONTO, JUNE 4, 1904.

NO. 23

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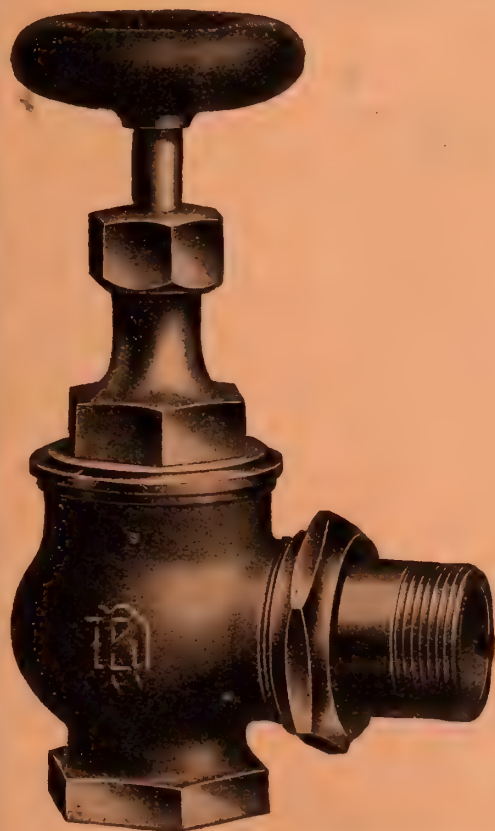
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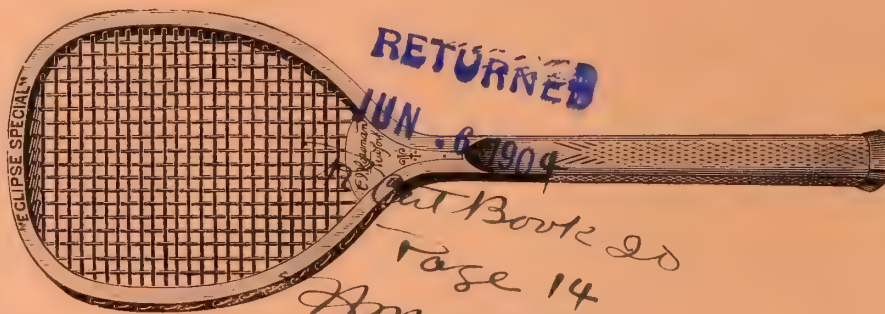
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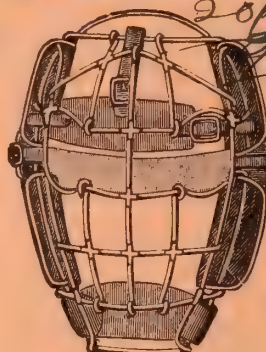
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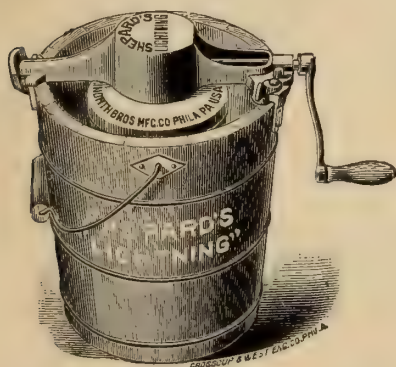
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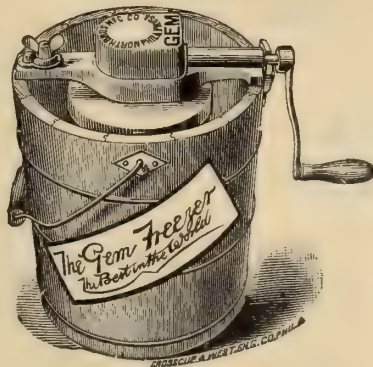
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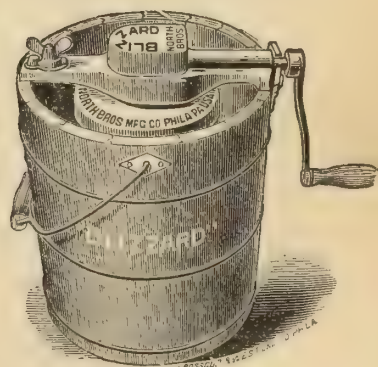
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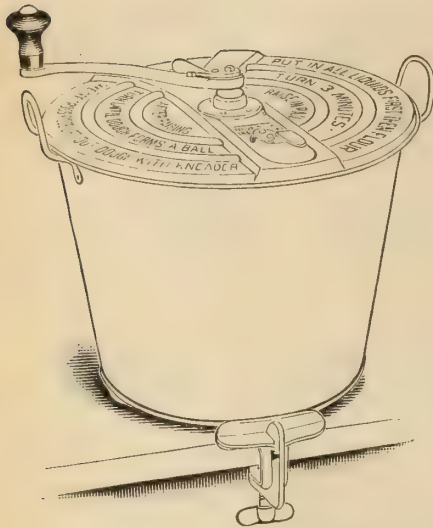
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we do so with confidence,
knowing it will do all that
is said of it.

To mix and knead
bread in **3** minutes may
seem extravagant, but it
is a fact

Here is a

**MIXER, KNEADER and RAISER
ALL IN ONE.**

The old and disagreeable task of Bread-making is done away with.

We shall be pleased to send booklets for your customers, and give prompt
attention to your sample order.

**DELIGHTED**

Bridget will be delighted
with the Russwin Food
Cutter. It makes her work
easier, pleasanter—gives
widest scope to her skill,
and does most in least time.
Just try it. For sale every-
where. Made by

RUSSELL & ERWIN MFG. CO.
NEW BRITAIN, CONN.

—FOR SALE BY—

The KENNEDY HARDWARE CO., Limited

49 Colborne St., TORONTO, ONT.

We have now in stock a full line of the following :

**GALVANIZED SHEETS,
BLACK SHEETS,
TINNED SHEETS,
IMITATION RUSSIAN IRON,
IRON PIPE,**

IRON and STEEL HOOPS.

**TINPLATES,
CANADA PLATES,
ZINC SHEETS,
COPPER SHEETS,
BRASS SHEETS,**

**METALS, ANTIMONY, COPPER, TIN, LEAD, ZINC,
PROMPT SHIPMENT. PRICES RIGHT.**

M. & L. Samuel, Benjamin & Co.

503 Temple Building

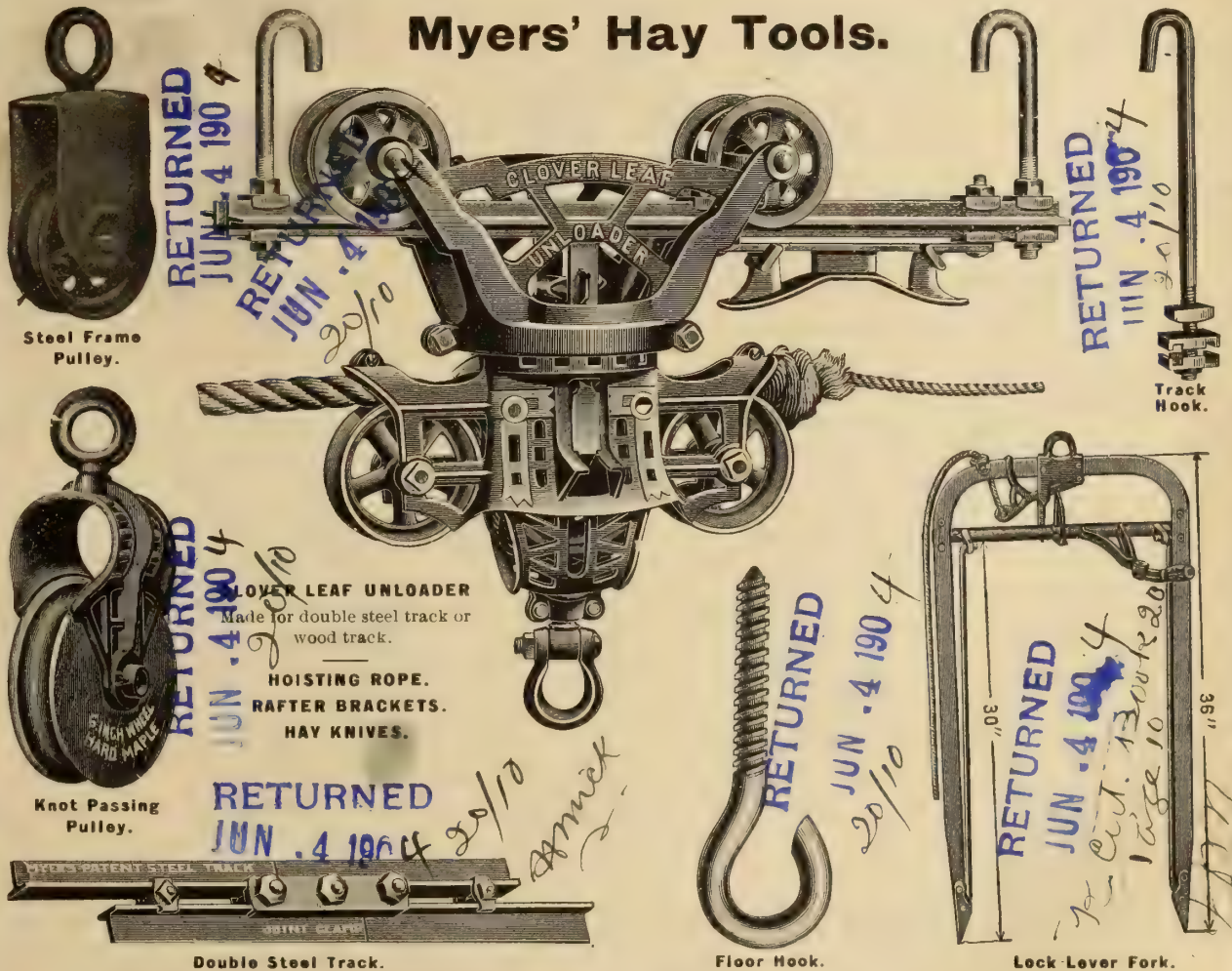
- TORONTO.

English House—16 Philpot Lane, LONDON, ENGLAND.

The Better Class.

Competition is a great game if you are the winner, or, it may be better for you if you are not in it at all. It generally means cutting prices and throats too;—and you know there is no money in that. Again, it's the price of every-day goods that suffers—goods that can be bought by almost every store in town, if they have a mind to buy them. Then why not get away from the common class of goods and stock lines that make business worth while. We know what we are saying, and if you do, you will pay more attention to the better class of goods.

Myers' Hay Tools.



Consult our thousand-page catalog—The most complete in Canada.

LEWIS BROS. & CO.

QUOTE
LOW

SHIP
QUICK

IMPORTERS AND DISTRIBUTORS.

Address all Correspondence to

TORONTO,
87 York St.

OTTAWA,
54 Queen St.

VANCOUVER,
141 Water St.

MONTREAL

Cordage
Of every description.
Net Mountings,
Sand Line,
Unoiled Cordage,
Marline,
Extra Long Lengths,
Ratline,
Shingle Yarn,

Core Rope,
Oil Well Cables,
Russian Packing,
Deepest Sea Lines,
Ancor Line,
Good Transmission Rope,
Engine Packing.

Clothes Lines,
Only Best Material Used.

Log Line
Twine.
Dangerous to use Inferior Cordage.

Mail
Orders
Now
To us and
Recieve
Exceptional
Attention.
Low-priced goods are not always
the cheapest.

TRUE BRAND CUTLERY.

POCKET CUTLERY

GUARANTEED QUALITY.

BEST GOODS



RAZORS

SCISSORS

RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., Montreal

WILCOX MFG. CO. OF ONTARIO, Limited LONDON, ONT.

HEAD
OFFICE

Door Hangers of every description, Automatic Fire Door Equipments, Overhead Trolley Carrying Systems, Velox Ball-Bearing Grindstones, Velox Ball-Bearing Emery Grinders, Triumph Wire Stretchers, Sash Weights.

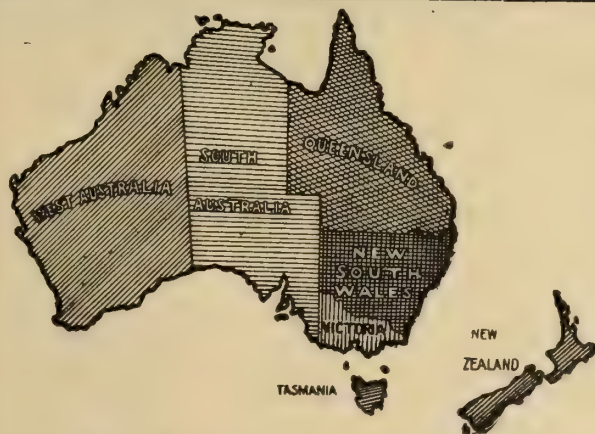
WRITE FOR PRICES.

FACTORIES:

AURORA, Ill.

ST. THOMAS, Ont.

HAMILTON, Ont.



Australasian Hardware and Machinery.

The Organ of the Hardware, Machinery and Kindred trades of the Antipodes.

SUBSCRIPTION \$1.25 PER ANNUM,

post free to any part of the world.

PUBLISHING OFFICES:

Melbourne . . . Fink's Buildings.
Sydney, . . . Post Office Chambers.

BRITISH OFFICES:

London, . . . 42 Cannon St., E.C.

CANADIAN AND AMERICAN ENQUIRIES will receive prompt attention if addressed to the LONDON OFFICE, 42 CANNON STREET, E.C.

Specimen Copies Free on Application.

Have you any call

for Brass
Stamped
Labels?



We make these goods in all sizes and designs to order. Let us have your enquiries for stamped brass goods such as:

Curtain Rings and Hooks,
Mill Band Fasteners, etc.

We will be glad to quote for special lines or submit samples of regular lines.



LOOK FOR **SAJONIC** THIS TRADE MARK

J. Nicklin & Co.

Canadian Agent:

F. P. ROGER
Carlaw Bldg. Toronto

Birmingham, Eng.



Just like fishing

Building up trade is just like fishing.

If you use the right kind of bait and cast your line where the kind of fish you want are most plentiful, you'll quite likely get a number of bites.

Then if you go about it right you are pretty sure to land most of them.

Apply the illustration to business.

If you want to catch the hardware trade cast your line where all the good hardware merchants in Canada congregate every week—looking for bait to build up their businesses with—in **HARDWARE AND METAL**. But

Suppose results don't come at first
What be yew goin' tur dew?
Take out yewr ad, and kick yewrself,
An' go ter feelin' blow?
Uv course yew hain't; yew're goin' tew fish,
An' bait an' bait again;
Bimeby some nibbles 'n bites 'll come,
Then yew'll pull 'em in.

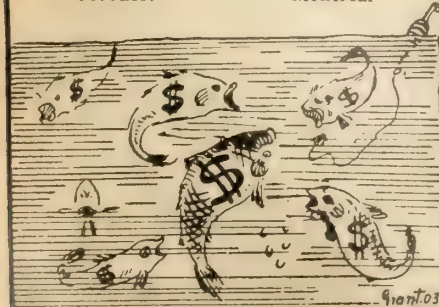
Our Department of Advertising Service is now providing good bait for a number of our advertisers—and stands ready to help a few more in this connection.

Drop us a line about it.

Hardware and Metal

10 Front St. E.
Toronto.

232 McGill St.
Montreal



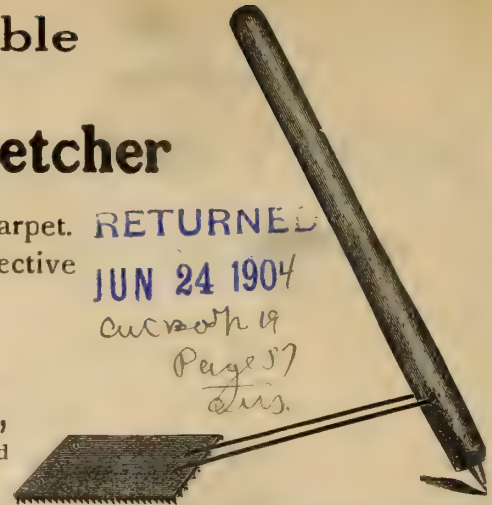
Department of Advertising Service

Always Salable The Galt Carpet Stretcher

Will not tear the finest carpet.
The Simplest, most Effective
Stretcher made.

SEND FOR BOOKLET.

Grand River Metal Works,
Galt, - Ont. Limited



RETURNED

JUN 24 1904

curry 19
Page 57
Jus.

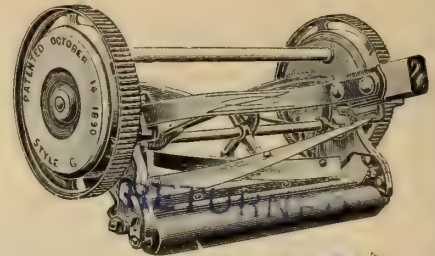
Lawn Shavers

This is the season of the year when the grass needs shaving. We can supply you with the most up-to-date Lawn Shavers in existence. The

Perfection

LAWN MOWER

is just a little ahead of anything on the market to-day.



The material used is of the highest quality only. The adjustment is easy and accurate. It cuts smoothly, runs easily, and will stay sharp a long time. In fact, it is the ideal Lawn Mower. Order a few and be convinced. All sizes in stock.

The Fisk & Jay Grass Trimmer needs no words to explain its use. It sells on sight. Let us send you a few with your order for Mowers. Prices are right.

ORDERS SHIPPED SAME DAY AS RECEIVED.

John Bowman Hardware & Coal Co.
LONDON, CANADA.

CANADIAN CORDAGE

& MFG. Co., Limited.

BINDER TWINE.



"ROYAL" MANILA, 650 ft. to the pound.

"ROYAL" MANILA, 600 ft. to the pound.

"ROYAL" MANILA, 550 ft. to the pound.

"ROYAL" MANILA, 500 ft. to the pound.

STANDARD, - 500 ft. to the pound.

SISAL, - 500 ft. to the pound.

Our "ROYAL" Brand of Binder Twine is manufactured of the finest raw material that can be obtained, and with the utmost care. For length and strength we have no competitors. Our twine is manufactured with the latest machinery, and dealers desiring to have exclusive agencies should apply at once.

Write, Wire or 'Phone.

CANADIAN CORDAGE & MFG. CO., Limited
Peterborough, Ont.

SHOT.

In ordering, please specify **The Abbey Improved Chilled Shot Co., Ltd., Newcastle-on-Tyne.**

N.B.—We also make Hard and Soft Shot but strongly recommend Improved Chilled Shot for penetration.

N.B.—The only Company in Great Britain devoting its whole time to Shotmaking.

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and ELECTRO PLATE.**
Ask for our Catalogue and Quotations.

**Dundas Axe Works**

DUNDAS, CANADA.

Write for Prices

P. BERTRAM, - Manager.

STEEL STAMPS

For Manufacturers of
MACHINERY and METALWARE

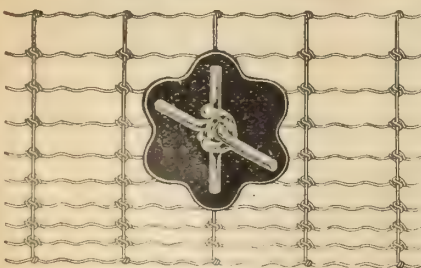
All our work is guaranteed to be satisfactory.

THE PARSONS-IRONS CO.

58 Adelaide St. W., - TORONTO.

Your Customers

the farmers are looking for a fence, strong, serviceable and durable at a reasonable cost. You can supply it to them in the

IDEAL

It is strictly up-to-date and the best value to be had in wire fencing to-day.

A GOOD SELLER

We have a style for every purpose in either heavy or light fencing. Write for catalogue showing fencing and gates.

Coiled-Spring Wire

unexcelled in quality, shipped promptly

THE

McGregor-Banwell Fence Co.

Limited

Walkerville, Ont.

MERRICK, ANDERSON & CO., Winnipeg
Sole Agents for Manitoba and N. W. T.



This design a guarantee of quality

WATERPROOF WRAPPING PAPER

For Express and Long Distance Packages. Put up in rolls 36 in. wide, 250 and 300 yards in a roll. Clean paper on both sides—waterproof substance in the centre—therefore it will not soil or stain delicate goods, as ordinary waterproof paper will. Practically odorless. May be used either for case lining or wrapping packages.

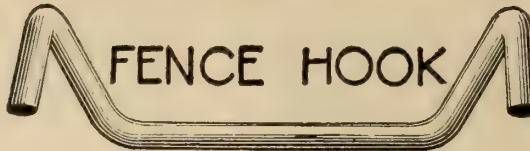
CANADA PAPER CO.

Toronto LIMITED Montreal

SAMPLES AND PRICES WITH PLEASURE

GALVANIZED FENCE HOOK

FOR FASTENING WOODEN PICKET ON WIRE FENCE.

**FENCE HOOK**

WIRE NAILS, COILED SPRING, BARB and PLAIN FENCE WIRE, OILED and ANNEALED, CLOTHES LINE WIRE, STAPLES, etc.

THE WESTERN WIRE & NAIL CO., Limited,

LONDON, ONT



"Little Shaver"

Cutest Thing in the Kitchen

Shaves chocolate so thin that it dissolves without stirring. Slices Potatoes, Radishes, Cucumbers, Onions, Apples and all the smaller fruits and vegetables. Made of black walnut. Knife is fine tempered steel.

Canadian Agents:

E. H. GRENFELL & CO.
LONDON, ONT.

MADE ONLY BY

J. M. MAST MFG. CO., Lititz, Pa.

SPRINGS

FLAT—SPIRAL OR VOLUTE

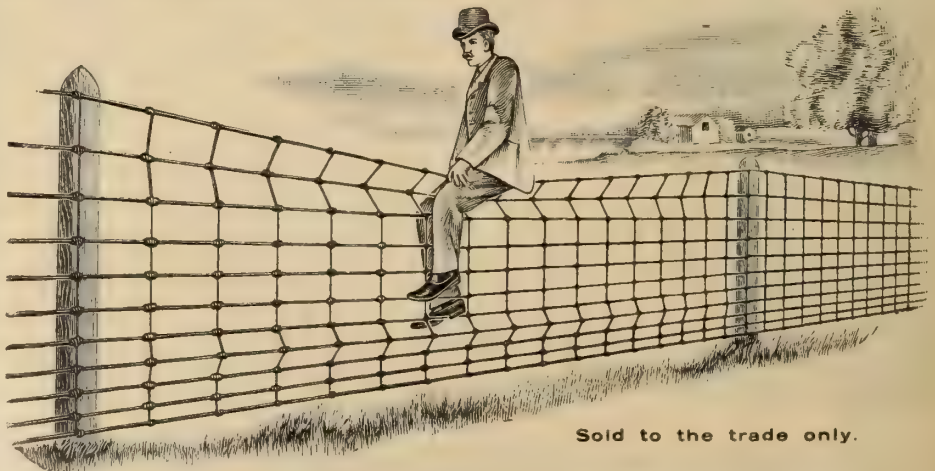
INTERESTING CATALOG MAILED ON APPLICATION

THE WALLACE BARNES CO.

BRISTOL CONN.

DILLON FENCING

THE HINGE IS COMPLETE, AND WORKS WITH THE UTMOST FREEDOM.



Sold to the trade only.

CAVERHILL, LEARMONT & CO., Agents
at Montreal and Winnipeg.

Manufactured and sold by
OWEN SOUND WIRE FENCE CO., Limited
Owen Sound, Ont.



ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows the
NIAGARA WIRE LINK
OPEN RING TYPE.

Also made in CLOSED RING, THREE CHAIN
and DOMINION (or "Short") TYPES.

Oneida Community Cow Ties can be had of all
the leading jobbers. We invite correspondence
where any difficulty is experienced in obtaining
our goods.

ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.

STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.

WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
and
TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO. LIMITED
MONTREAL and TORONTO

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE
PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of
every description; Rail Bonds, Bale Ties, Special Wires for all
purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel
Shafting.

WIRE CLOTH

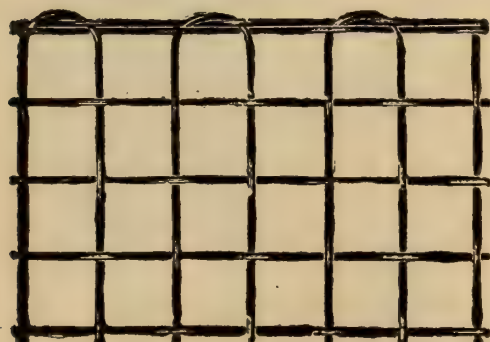
*Special Regalvanized Cloth for Apple and
Fruit Drying.*

Stock widths, 24, 30 and 36 in.
Other widths and meshes made to order.

Also 1/2 in. Galvanized Netting.

Stock widths, 24, 30 and 36 in.
Stock lengths, 25 and 50 yards.

Also Wire Cloth and Netting, for all purposes.



THE B. GREENING WIRE CO., Limited

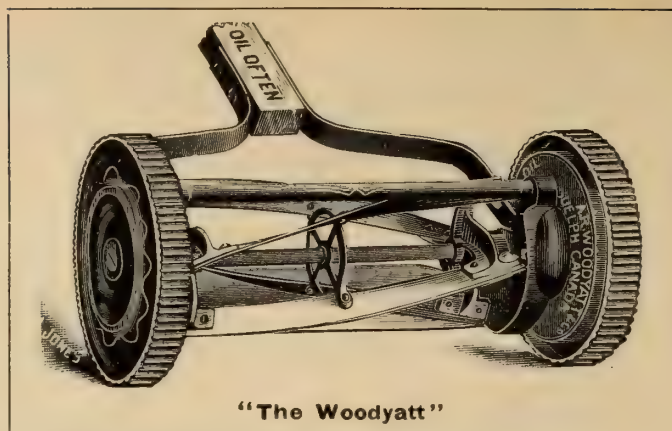
Hamilton, Ont.

Montreal, Que.

After it is Sold

—Which Mower will do
you most good?

That is the question.



Taylor- Forbes Lawn Mowers

is the answer to the
question.

W H Y ?

TAYLOR-FORBES Lawn Mowers are guaranteed broadly. They are examples of the best material and workmanship. They can be supplied with parts quickly and at minimum expense. They are made in Canada. They are distinctly better than imported mowers. They can be had without delays.

ORDER FROM YOUR JOBBER.

SEND FOR CATALOGUE "B."

THE TAYLOR-FORBES CO., Limited

Montreal Branch:
9 De Bresoles St.

GUELPH, CANADA.

The largest manufacturers of Hardware in Canada.

Kemp's Cold Blast Lanterns

The success which our Lantern has achieved is largely demonstrated by the points of superiority that it possesses.

A Combination Lift and Hinge Lantern.

It is easily adjusted.

Its burning qualities are unexcelled—

WILL NOT BLOW OUT.

WILL NOT SMOKE.

WILL NOT LEAK.

WILL NOT BREAK GLOBES.

If your customers desire such a lantern, sell
them ours.



THEY DO NOT COST MORE THAN OTHER MAKES

KEMP MANUFACTURING CO., TORONTO, CAN.

MAINLY ABOUT OURSELVES

A Personal
Talk by
The Editor

EXPANSION has been the watchword of Hardware and Metal for some time. Some time ago, while in an Eastern Ontario town, the writer heard the history of a comparatively young hardware firm, a story that was as inspiring as it was educative. Two young men had started in business in a moderate way, a dozen or so years ago. They had worked like beavers until they had the largest retail trade in their town, and their customers were numbered for many miles through the surrounding country. What seemed the natural limitations of their business had been reached. Yet their ambitions were not satisfied; they felt the capacity for wider activities. So, instead of settling down to enjoy the comparatively easy life of prosperous retail merchants, they expanded, first adding a machine shop, and later a foundry to the establishment. Now, what seemed to be the final development of their business appears to be merely the beginning, and what further extension may be made is quite beyond calculation; can only be measured by the continuity of the enterprise that has marked their efforts up to the present.

Do you now understand how inspiring the details of such a business story would be to one whose life is devoted to the study of trade problems, and who is ever on the alert for any suggestion that may be of value to his clients, his constituency?

If some of the hardware retailers of Canada could know the mental processes that have caused the owners of this firm to keep pressing on, and on and on, to continue expansion after expansion, they would find inspiration for the months of possible toil and worry that lie before them. Hard work and a steady onward pressure will bring their own rewards. But why do we not tell this story? We hope to some day.

* * *

But in what way does all this concern the management of Hardware and Metal? In a most direct and vital manner. We preach expansion; we advo-

cate it for the retailers, the jobbers, the manufacturers of Canada. To advocate it honestly we must believe in it; we do. And the belief in it is not limited to a confidence in its efficacy for the retailer or the manufacturer, but also for ourselves.

Hardware and Metal to-day includes among its subscribers almost every hardware dealer of any account from the Atlantic to the Pacific—except in some parts of Quebec. We have the great bulk of the best Quebec hardwaremen, but not all, as in the other provinces. We have the great majority of the plumbers of the Dominion. During recent years we have paid much attention to the machinists and foundrymen, and have been able to build up a strong connection in this constituency.

It is the policy of Hardware and Metal to secure circulation first, counting on the advertising (which is admittedly the bone and sinew of a trade paper) to follow in due time. A glance through this and recent issues will show our readers how we have continued to devote much attention to our machinery and foundry readers, although we have not been supported by machinery advertisers.

Why have we done this? Because we desired to hold and add to our connection with machinery buyers. We have been successful in this respect, and now we intend making an effort to convince machine-tool manufacturers of the value of Hardware and Metal as a medium for advertising their lines to machinists and foundrymen. This is the chief thought in our expansion policy (as it concerns ourselves). We feel confident that we will receive every assistance in this matter from our readers. If we do, the success of our efforts is assured.

* * *

Yet, while we intend to continue devoting much time and space to our machinery department, hardware dealers can depend that we shall not neglect their interests. In this issue will be found some valuable sugges-

tions on window display and on advertising, while other departments in the paper will be found fully up to the mark. We are proud of the manner in which the retail hardware trade have stood by us year after year. Whatever expansion, whatever development the years may bring, the hardwareman shall never be neglected, nor his interests lost sight of.

* * *

Eastern Canada is destined to become an industrial country, just as the Eastern United States have become industrially strong. If Hardware and Metal, through the suggestions in its news columns, by its weekly reports on trade conditions and its market quotations on the necessary materials, can assist the hardwareman to get the largest possible share of the rewards of this industrial activity, it will be fulfilling a destiny worthy of any newspaper, quite in keeping with the purpose of a trade paper. We would like to hear of hardwaremen in all sections of the country branching out—expanding in one way or another. One may add tinsmithing, furnace work, etc. If he does, he should not be content until he can figure on heating every building that goes up in his district, whether it be by hot air, hot water or steam. Another may add plumbing. If he does, he should not be content until he can estimate properly on the largest jobs that may ever be within his reach. A third may, like the firm referred to above, add a machine shop or foundry. These offer the greatest possibilities, especially in a country the industrial future of which is as promising as in Canada.

When we recommend expansion, however, we have not in mind any cut-price or get-rich-quick plan—the thought is the development of the best system, stocking the best range of goods in the most attractive manner; in short, building up a sound, growing business by the most modern methods, the chief of which is steady, hard work.

AN EXPANDING HARDWARE FIRM.

ON the first of June the style of Dodd & Rogers, wholesale and retail hardwaremen, Charlottetown, P. E. I., was changed to The Rogers Hardware Co., Ltd. The capital of the company is placed at \$200,000, under the control of the Rogers family, Benjamin Rogers, sr., being president, and Benjamin Rogers, jr., secretary-treasurer of the company.

Dodd & Rogers were one of the oldest hardware firms on Prince Edward Island. Mr. Rogers started with the firm when a lad of seventeen, and after four and a-half years was admitted to partnership. The business has steadily grown. In 1867 the expansion made it necessary for them to move from a small store on Pownal street to the present premises, which has since been enlarged to meet trade requirements. Twelve years ago Mr. Dodd retired and Mr. Rogers assumed full control of the business.

In 1899 an annex was completed which gave the premises an area of 140x40 feet. It has now been necessary, however, to add another store, so the firm bought the Medical Hall corner. It runs back 140 feet and has a frontage of forty feet on Queen street. The store on the lower floor is at present occupied by J. G. Jamieson, but the upper storeys and an apartment in the rear have been under rent to Dodd & Rogers for some years past.

The corner building does not run so far back as the other, and has in its rear a vacant lot 40x60. On this site the Rogers Hardware Co. will have their new office, it being necessary to erect two walls only. The office will have its entrance on Grafton street. It will be thoroughly up-to-date in structure, design and appointments. The bottom of each window will be six feet above the floor, and the top just below the eaves. The furniture will be of the most approved type, substantially and attractively finished. The main building, as well as the added property, will undergo considerable alterations.

The present main hardware store, on the first floor, will be enlarged so as to take in the two offices now in use, and the packing room in the rear, thus giving a total floor space of 90x40. The two upper storeys in the corner building have hitherto been used mainly as showrooms for stoves. Henceforth what

is now the drug store, to be occupied as soon as Mr. Jamieson's lease expires, will be the showroom, where not only stoves, but kitchen utensils and specialties will be displayed. To make it suitable for its new purpose, the apartment will require a number of changes, including the removal of the counters and shelves, and the transformation of its whole front to correspond with the main store adjoining, with one door instead of two, and the window space increased.

The upper storeys mentioned will be used for storing, shipping and packing; the packing room to be located probably over the offices. The second floor of the other building will contain paints and varnishes; the third, tinware and light goods. In the basement will be kept all the glass and dry paints. The three large warehouses, two directly in the rear and one fronting on Grafton street, will be used as heretofore. As a result of the improvements, admirable facilities will be provided for displaying and handling the great stock of goods. Not only is the area greatly increased, but customers will be enabled to make their selection without leaving the ground floors. At present one traveler is employed, and another man will be put on the road about the first of July.

The firm's retail store is one of the most attractively appointed in Canada. The steel ceiling of handsome pattern, the walnut counters, and show cases of most approved style, are features of the furnishings. The customers are at once impressed with the admirable arrangement and what could be termed almost artistic display of the goods. Everything is shown to the very best advantage. The spirit of refreshing neatness and systematic order prevails. Buyers can take in the stock at a glance, and make their purchases from each department with ease and satisfaction.

Trolley competition is affecting the steam railways in the State of Indiana, says an exchange. Officials of the Lake Erie & Western Railroad have under consideration a plan for meeting the competition of electric lines which parallel the railroad by installing electric motors drawing single cars and running at the rate of fifty miles an hour between Lafayette and Indianapolis.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Generators and Fan Motors.

THE Canadian General Electric Co., head offices, Toronto, are sending out two new bulletins, No. 833 and No. 829. Bulletin No. 833 illustrates and describes their 1904 ceiling fan motors, including price lists. Bulletin No. 829 deals with their generators, their construction and specifications. This supersedes bulletin No. 819. Readers of *Hardware and Metal* may secure these bulletins upon application to the Canadian General Electric Co.

New Era Gas Engine Co.

Hardware and Metal has received from the New Era Gas Engine Co., Dayton, O., a circular describing and illustrating their New Era Gas Engine, also the general catalogue of the company. The catalogue is a handsome one, illustrating and describing in detail the general construction of the gas and gasoline engines manufactured by the company, and also their New Era Patent Friction Clutch Pulley. At the back of the catalogue some suggestions are given about keeping gas engines in good trim, and there is also a summary of what this firm considers the advantages of a gas engine over a steam engine. To users and prospective buyers of gas or gasoline engines this catalogue and circular would prove of value. These can be had on application.

Feed Water Heater.

The Whitlock Coil Pipe Co., Hartford, Conn., are sending out a booklet illustrating and describing the American Standard Copper Coil Feed Water

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

Heater. It is a very neat thing, and contains some information that all users of steam power should be familiar with. Feed water heaters in general are first discussed, then the copper coil heater. Readers of Hardware and Metal may secure a copy of this catalogue upon application to the Whitlock Coil Pipe Co.

Deming Power Pumps.

The Deming Co., manufacturers of pumps, well supplies, etc., Salem, O., are sending out to the trade a copy of their power pump catalogue, illustrating and describing their pumping machinery for various purposes, including triplex power pumps and deep well pumping engines for operation by steam engine, gas, gasoline or oil engine, electric motor or water power. They announce that they have established an agency in Canada for their pumping machinery, with Messrs. Darling Bros., Montreal. The firm wish that inquiries from Canada be referred to this firm, who will be in a position to execute with engineering skill all orders in the line mentioned. The firm are also preparing a new edition of the catalogue for issue in the Summer, and readers of Hardware and Metal may receive it upon application to Darling Bros., Montreal.

A. R. Williams.

Hardware and Metal has received from the A. R. Williams Machinery Co., Toronto, a copy of the chain catalogue of the Jeffrey Mfg. Co., engineers, founders and machinists, Columbus, O., for whom the A. R. Williams firm are Canadian agents. This catalogue illustrates and describes various kinds of chains and drives for elevators, conveyors, drive-belts and sprocket wheels. Readers may obtain a copy of this catalogue upon application to the A. R. Williams Machinery Co., Toronto.

Cincinnati Air Compressor.

The Laidlaw-Dunn-Gordon Co., Cincinnati, O., are sending out bulletin L508, describing and illustrating the Improved Cincinnati Air Compressor. In the front of the bulletin are given the details of construction, each detail being well illustrated. Then follow illustrations and specifications of each class of compressor. Readers of Hard-

THE SHERWIN-WILLIAMS ENAMEL PAINT

A Money Making Specialty.

Enamel Paint is one of the best selling specialties in The Sherwin-Williams line. It is backed by highest quality and strongest advertising.

It requires great care and right facilities to make good enamel paint—to have in it the free flowing and easy working qualities. **The S-W. Enamel Paint** is manufactured expressly with a view to these necessary qualities. It is very elastic, does not crack or peel off readily, and is easily applied.

Enamel Paint is the sort of specialty that will win trade for you—one can of it always sells another—its quality draws custom. No other specialty shows more profit or is more satisfactory to sell.

Better write for color card and prices today.



THE SHERWIN-WILLIAMS CO.
PAINT AND VARNISH MAKERS.

CANADIAN DIVISION:

HEADQUARTERS AND PAINT FACTORY,
21 St. Antoine St., Montreal.

VARNISH FACTORY,
St. Patrick St., Montreal.

TORONTO DEPOT
86 York St.

WINNIPEG DEPOT,
147 Bannatyne St., East.



For painting washstands, bedsteads, dressers, chairs, etc., The S-W. Enamel Paint is a ready seller because it always gives satisfaction. It dries quickly with a good lustre and does not pull or drag.

It is made in 14 beautiful colors, put up in quarter pint to quart cans.

ware and Metal may secure one of these bulletins upon application.

Sheldon & Sheldon.

Hardware and Metal has received from Sheldon & Sheldon, Galt, Ont., a copy of their mechanical draft catalogue, in which are pointed out some of the advantages of the application of mechanical draft to power plants. A copy of this catalogue should be in the hands of all those interested in power plants. Readers of Hardware and Metal may secure a copy by applying to Sheldon & Sheldon, Galt, Ont.

Electrical Machinery.

The Triumph Electric Co., Cincinnati, Ohio, have issued a very handsome catalogue, describing and illustrating their machinery and its application for

different purposes. The general get-up of this catalogue is very attractive; the paper, the illustrating, and the typographic execution being of a high order. In this catalogue there is no attempt made to describe the detail construction of any of their machines, but the purpose of the catalogue is rather to call attention to the advantages to be derived in economy and efficiency of a plant by the application of the electric drive. What is said is very instructive, and the catalogue would be of great value to any manufacturer thinking of installing the electric drive.

Power Transmission.

Power Transmission Economiser, the monthly booklet issued by the Dodge Mfg. Co., of Toronto, Ltd., for May, contains an article on "The Best Kind of Pulley to Buy"; it also contains an article entitled "The 'Odd Size'

Friend," which deals with the convenience to buyers of being able to obtain from the Dodge Mfg. Co. so many sizes of wood split pulleys, which may be termed standard sizes.

The Globe Brass Works.

The Globe Brass Works, Detroit, Mich., have a catalogue ready for distribution which the trade should have on hand for reference. This firm are recognized as reliable manufacturers of brass valves, cocks, gauges, bibbs, fire pots, torches and other supplies for machinists, plumbers, tinsmiths, etc. As the firm are offering good terms on all these lines their catalogues should be of decided value to the trade. Copies will be sent on request to readers of Hardware and Metal.

JOHN LYSAGHT, LIMITED.

THE third annual general meeting of shareholders was held at the head office of the company, St. Vincent's Iron Works, Bristol, on Wednesday, when Mr. Sidney R. Lysaght presided. He said that he regretted their chairman was not able to be present, owing to illness, but he was glad to say that his indisposition was not of a serious character.

The secretary then read the notice convening the meeting, and also the auditors' report. The directors' report, which has already appeared, was submitted.

The chairman, in proposing the adoption of the report and accounts, said that the latter showed a result which he thought would be considered most satisfactory, and that the figures were such as to need very little comment from him. The profits hardly reached those of 1902, and had been earned with more difficulty and an increased turnover. Considering, however, the keenness of competition, the result was satisfactory, and bore witness to sound organization and good management. It had been mentioned last year, and he wished again to point out the advantage to the business of its diversified operations. These not only comprised the manufacture of black and galvanized sheets, but included a large department of engineering and constructional ironwork, the smelting of spelter, the weaving of wire netting, the production of agricultural appliances, and other contributory adjuncts; while the distributing branches and agencies were not confined to one country, but had been established through all the colonies and in many foreign markets. Again the good result

THE RECOGNIZED

4th OF JULY REVOLVER



I. J. Model 1900 Double Action

The best Revolver for the money in the world. Order of your jobber, and insist upon getting it. Do not allow of substitution. Made by

Iver Johnson's Arms & Cycle Works

MAKERS OF THE FAMOUS

IVER JOHNSON REVOLVERS, GUNS and BICYCLES

*NEW YORK OFFICE,
No. 99 Chambers Street.*

*ARMORIES & GENERAL OFFICES,
Fitchburg, Mass., U. S. A.*

had been obtained, not by the exceptional profit of any one department, but by the fair and steady returns from a great number. The shareholders would have noticed that a sum of about £25,000 had been added to the general reserve fund, bringing that up to £130,000, and that a further £1,000 had been added to the workmen's provident fund. Mr. Lysaght concluded by saying that the brevity of his remarks might, he thought, be taken as an indication of the satisfactory position of the business, and that he felt much satisfaction in putting before the meeting figures which required neither explanation nor decoration. He moved, "That the report of the directors, together with the balance sheet and profit and loss account up to 31st December, 1903, be and are hereby approved, and that the dividend at the rate of 6 per cent. per annum upon the preference shares, which has already been distributed (less income tax), up to 30th April, 1904, be and is hereby confirmed, and that a dividend at the rate of 10 per cent. per annum upon the ordinary shares for the year 1903 (less income tax) be and is hereby declared, payable forthwith."

This was seconded by Mr. H. G. Hill, who thought that the state of progress

placed before them was such as a Bristol company might well be proud of in these times of stress and strife. On being put to the meeting, it was adopted unanimously. The chairman moved that Mr. F. P. Lysaght and Mr. E. Davey be re-elected directors, and this was seconded by Mr. D. F. Boles, and carried.—Iron and Steel Trades Review.

ANOTHER INDUSTRY.

A granite and marble business has been started in Guelph, under the name of the Guelph Marble and Granite Works, by John McIntyre, who has been carrying on a similar business in Orangeville for some time.

CANADIAN IRON IN SCOTLAND.

A recent despatch from London states that the Yorkshire Post says that, considering the increasingly large shipments of Canadian iron into Scotland, Canadian iron is bound to become an important factor in the world's iron industry. This paper also says that Canadian companies have now less to fear from German than from British, since the inception of the German steel trust.

June 4, 1904

HARDWARE AND METAL

H. S. HOWLAND, SONS & CO.

LIMITED

WHOLESALE
ONLY.

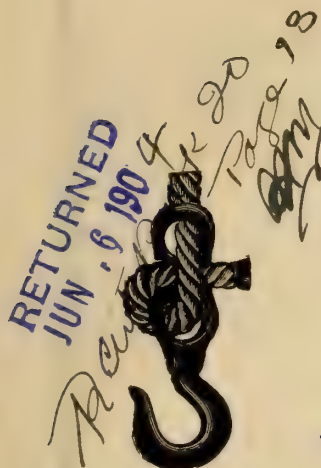
TEMPORARY WAREHOUSE:
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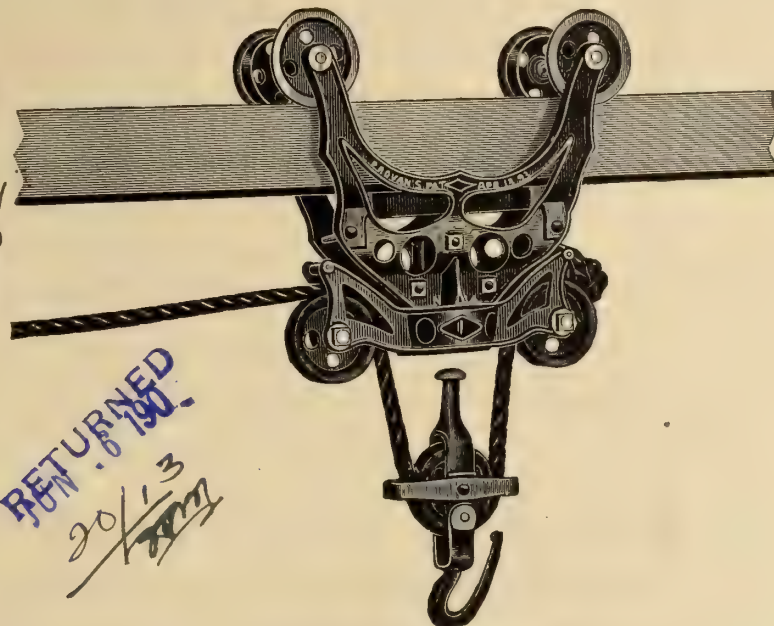
Telephone,
Office, Park 1584.

CITY OFFICE—21 Scott Street; Telephone, Main 4056.

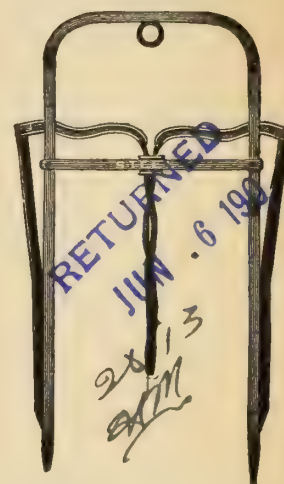
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Warehouse, Park 1585.



Swivel Rope Hitch



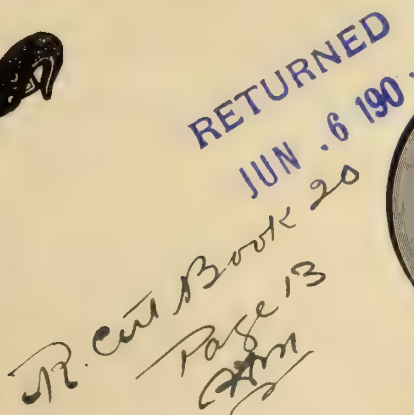
"Diamond" Wood Track Carriers
Steel " "
Complete with Ball Pulley and Stop Block.



Double Harpoon Fork



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Grindstones

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

Our prices are right.

GRAHAM NAILS ARE THE BEST.
Factory: Dufferin Street, Toronto, Ont.

We Ship Promptly.

New and Second-Hand Machinery,
Engines, Boilers, Belting, Pulleys,
Motors, Etc.

Any readers of this paper wanting
any of the above goods may have
an advertisement inserted free in
HARDWARE AND METAL, the
machinery weekly newspaper of
Canada, by enclosing this notice.
Address

HARDWARE and METAL
Montreal, Toronto, Winnipeg.

The Hamilton Steel & Iron Company

LIMITED

HAMILTON, - CANADA.

**OPEN HEARTH
STEEL CASTINGS
OF ANY WEIGHT.**

NOT IN THE COMBINE

Ask for Prices of
Shovels, Spades, Scoops, Etc.
WE HAVE A LARGE STOCK.

CANADA HARDWARE CO., Limited, Montreal



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Page 15

Ans.

FAIRBANKS' BRAND

REFINED CAST STEEL

FILES AND RASPS

THE BEST MADE.

We make a specialty of Machinists' Tool Makers' Files and carry an assorted stock.

Write for prices.

The Fairbanks Company

Montreal

Toronto

Winnipeg

Vancouver

MACHINERY

THE MACHINERY MARKETS.

Office of **HARDWARE AND METAL**,
10 Front Street, East.
Toronto, June 2, 1904.

EVERY week for some time past has seen a large number of machinery orders filled, and although no very large ones are reported this week, there is a good steady business being done. There is no great change from last week, both of which opened up well, but it is said that trade is hardly as good as it was a year ago. Inquiries are coming in in large numbers, but collections are not very good, this being due to the depression of the past few months.

General mill supplies are selling best, and a few orders for engines and boilers for saw mills are reported.

Ontario.

Office of **HARDWARE AND METAL**,
232 McGill Street.
Montreal, June 2, 1904.

CONDITIONS on the machinery market are reported fairly active this week. There is, however, no very special feature to be noted. There have been numerous inquiries received by local dealers.

One dealer reports many inquiries for engines and boilers, and not a few for planing mill outfits and wood-working machinery in general. For machine tools and iron working machinery there have not been the number of inquiries in keeping with the rest of the market. The demands for electrical machinery has been good, as usual, and inquiries have been coming in freely.

Setting Up and Running Steam Pumps.

IN buying, setting up and running steam pumps, users have to take several important facts and conditions into consideration before they can obtain the most economically running pump.

In buying pumps, the user should determine: First, the maximum quantity of liquid to be pumped per given interval of time; second, to what height the

liquid is to be lifted by suction, together with the length of the suction pipe and the number of elbows in it; third, to what height, or against what pressure the liquid is to be discharged, and the diameter and length of the discharge pipe; fourth, what steam pressure is available at the pump. It is quite evident that if the manufacturer is supplied by the buyer with the information regarding the foregoing conditions he will be in a position to supply the most economical kind of pump necessary to operate under those conditions.

A few hints regarding the setting up and running of steam pumps may prove of use to those interested in that line of machinery.

The longer the pipe is through which the liquid is pumped, the greater is the friction, so that, should the pipes be very long, the diameter should be increased, in order that the large amount of friction occasioned by the length of the pipe may be counteracted to some extent by the less amount of friction occasioned by the increase in diameter. Especially should this be done in the suction pipes. Again, in order to keep friction down as much as possible, as few T's, elbows and valves as possible should be used, since they tend to increase it greatly; and for the same reason, round bends, instead of elbows, should be used.

If the suction lift is high or the suction pipe long, a priming connection will be necessary; and a vacuum chamber should also be used, since it helps very materially in securing smoothness of operation. Under the same conditions a foot valve insures quick starting of the pump by maintaining the suction pipe full of water.

If the suction pipe is not vertical, it should be laid with a uniform grade from the source of supply to the pump, since under that condition will friction be least.

It often happens that a pump refuses to lift water upon being started with the full pressure against which it is

expected to work, is resting on the discharge valves, for the reason that there is air in the pump cylinders and in the pipes, and the motion of the pistons merely compresses this air. For this reason it is well to run the pumps without pressure until the air is all expelled from the suction pipe and cylinders. This may be done by placing a swing check valve in the discharge pipe, near the pump and opening the air vent in the discharge pipe, or in the bonnet of the pump.

Finally, if you wish to get satisfactory service give the pump reasonable attention.

Locomotive Shops to be Enlarged.

ROGER MILLER, general manager of the Locomotive & Machine Co., Montreal, in an interview has made the statement that \$25,000 has been set aside for the extension of different plants at the Longue Point works. One hundred feet are to be added to the structural plant; one hundred and sixty will be added to the foundry; sixty feet will be added to the erecting shop, and sixty to the blacksmith shop. In addition, new and improved machinery is being installed every day. The locomotive shops already have a capacity of two locomotives per week, but by the end of August will have a capacity of four.

Mr. Miller also said that there were contracts on hand for forty-five locomotives, all of which were to be turned out this year.

From what Mr. Miller said, the company have been having some trouble in getting the number of skilled workmen they need. At the present time there are openings for 500 skilled mechanics if the men were forthcoming, and with the improvements that are being made to the works, there will be 1,500 men needed by the beginning of August. This condition of affairs has decided the company to send to England for mechanics, since the amount of work on hand prohibits them from taking on unskilled men and training them.

GAS GENERATOR FOR POWER.

IN last week's issue of Hardware and Metal reference was made to a gas generating plant being installed in the Mount St. Louis Institute. Information regarding these plants has been furnished by the Canada Gas, Power & Fuel Co., of Three Rivers, Quebec, of which Louis H. Bacque is acting manager. These plants are in great demand on account of their economy and simplicity in operation, and the company recently organized have already many orders ahead. The construction of the generator is simplicity itself. It is nothing more nor less than a sort of self-feeder stove, without the feeder compartment being separated from the combustion chamber. The coal falls down to the bottom of the apparatus as fast as it is burnt up by the process of making the gas. The whole apparatus being air tight and gas tight, steam and air are either blown in or aspirated, as may suit the fancy of the builder, and the fire being once started, the carbonic acid gas produced by the combustion of the lower layers of coal passes through the upper layers, which are heated to a red heat, and is thereby reduced to carbon monoxide, which is a combustible gas. At the same time the steam blown

cease, and there being no gas, the engine would stop.

"There is not in existence to-day," says Mr. Bacque, "a steam plant that can approach these plants as an economic source of power, for either large or small installations. The larger the plants become, the easier it is to realize a very large saving over steam. Their advantages, on the other hand, are noticeable indeed. The plants consume scarcely any water to begin with, and the quality or chemical composition of this water is a matter of absolute indifference. There are no troublesome cleanings or inspections to be put up with, as in the case of boilers.

"The insurance rates are reduced by the absence of the boiler, and no skilled labor whatever is required in connection with a plant of this kind. There is absolutely no danger of explosion, and in Paris and Berlin, as well as in all large towns in England, these plants are allowed to be put even in a cellar where their cost does not exceed, and in some cases is less, than a boiler of equal capacity.

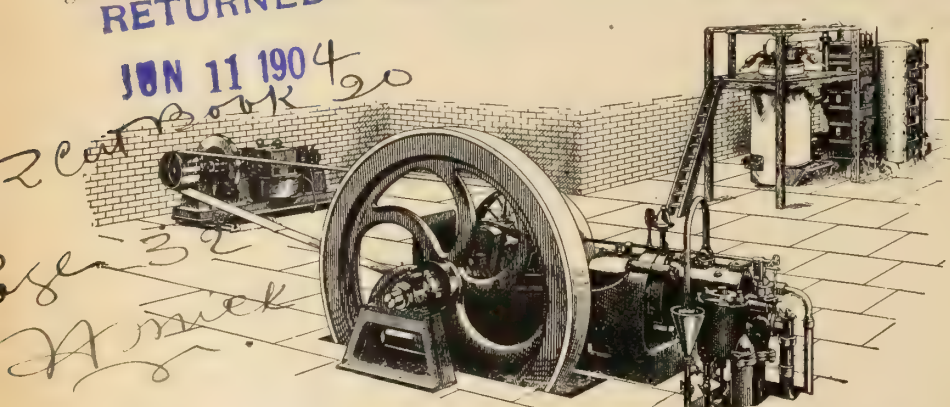
"The quality of fuel required to be stored for a given amount of power is very much reduced, and there is a cor-

the consumption of less than one and one-quarter lbs. of anthracite coal, while the very best steam plants, probably run with not less than three lb. for hour horse-power. Most steam plants in the country are running on consumption varying between four and ten or twelve lbs. of coal for effective horse-power measured by breaks. Finally, the most remarkable thing about these plants is that the results obtained in every day practice with unskilled labor are as good as those obtained at the tests. The coal feed being almost automatic, no stoker is required. There is no danger of explosion from leaks in the plant, for the introduction of any large quantity of air would only result in the stopping of the engine. The radiating heat is not much more than that of a small heating stove, and as there is no coal burnt in the plant, but simply the transformation of it into gas, there is no smoke.

As a fair sample of what these plants can do, and what they are now doing, the case of the plant installed at Dufresne & Locke's, boot and shoe factory at Maisonneuve, may be cited. Whereas the power required is eighteen to twenty horse-power, the expenditure formerly amounted to \$18 per week, for fuel alone for generating steam. To this had to be added the wages of a fireman, at \$9 per week, making a total of \$27 per week. With the new suction gas plant installed there lately, the weekly expenditure has been reduced to \$5.02 1-2, made up as follows: City gas for starting the plant, \$4.25; 1,100 lbs. of coal at \$5 a ton, amounting to \$2.77 1-2. When a proper pressure blower (which is ordered) can be installed, the expenditure for city gas will be done away with. This goes to show the very great economy experienced in installing one of these gas plants.

Metal Ceiling Machinery.

REFERRING to the announcement in our issue of May 7, of the formation of the Galt Art Metal Co., Galt, Ontario, Canada, the Canton Foundry & Machine Co., Canton, Ohio, advise us that they furnished the company referred to with their entire metal ceiling and ornament plant, including classified designs by F. M. Vogan, their ceiling expert, with dies, presses and everything complete. The company also equipped the factory of the Metal Shingle & Siding Co., of Preston, Ontario, Canada, and that of the Milwaukee Corrugating Co., Milwaukee, Wis., the latter comprising five carloads



Plant of 100 H. P. gas engine, with a "producer gas" generator, running a dynamo.

in or aspirated by the engine itself (as is the case of the Mount St. Louis installation) is decomposed by the red hot coal into its constituent elements, hydrogen and oxygen, the latter of which takes up more or less carbon, according to the conditions of temperature, and becomes either carbon monoxide or carbonic acid gas, as the case may be. The object of those in control of the apparatus will be to find that position of heat equilibrium which will produce the smallest quantity of carbonic acid in the resulting products, while at the same time maintaining such a temperature in the plant as will insure no loss of heat, for in that case the reaction would

responding economy of space, which is worth considering. Raising steam in an ordinary boiler takes from thirty to sixty minutes, and anywhere from 50 lbs. to 200 lbs. of coal, according to the size of the plant. In the case of these gas plants, the fire is blown and gas ready to make a start inside of ten minutes at the outside, while the consumption of coal does not exceed ten to twenty lbs. to get fairly under way. These plants give double the efficiency as to coal consumed of a first-class boiler. The repair bill of a gas plant is almost nil, while that of a boiler is considerable.

The horse-power is guaranteed for

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

Don't Forget the Name. . .

NEWMAN'S INVINCIBLE FLOOR SPRINGS

Strong, Quick, Reliable, Effective.

Will close a door against any pressure of wind. Far ahead of ordinary door springs, pneumatic or otherwise. Ask your wholesaler.

W. NEWMAN & SONS, Birmingham.

IT WILL PAY YOU



to stock the best globe valves "made in Canada."

KERR'S are made of the best steam metal, accurately fitted and perfectly tight.

CATALOGUE FOR THE ASKING.

THE KERR ENGINE CO.,
WALKERVILLE, ONT. Limited

SPECIFY



INJECTORS

PENBERTHY INJECTOR CO.,
LIMITED.

BRASS MFRS. Windsor, Ont.

TRUCKS

for **Warehouse**
and **Factory.**



Save You Money
Do Men's Work
Draw no Salary

Our Trucks are guaranteed satisfactory.
Turn in their own length.

MADE IN CANADA.

H. C. Slingsby for Canada.

Factory, Temple Building,
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"Pullman"
Lawn Sprinkler

IS YOUR
ORDER IN?
Send for Folder No. 14.

PULLMAN MFG. CO.
Rochester, N.Y., U.S.A.

WORK AND
PRICES
RIGHT
GALVANIZING
ONT.
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ENGINE & PUMP CO.
TORONTO, ONT. LIMITED.

BABBIT

THE
QUALITY & PRICE TO SUIT
ALL GRADES OF WORK.

CANADA METAL CO.

NO. 0
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STAR
SPECIAL
HERCULES
METALLIC
IMPERIAL

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



BEAVER POST HOLE DIGGER

will please your customers.

No wood to rot or check.

SPECIAL DISCOUNTS TO THE TRADE.

CANADA FOUNDRY COMPANY,
LIMITED

Head Office and Works, TORONTO, ONT.

District Offices — Montreal, Halifax, Ottawa, Winnipeg, Vancouver,
Victoria, Rossland.



TO POLISHERS.

If corundum be next in hardness to the diamond, and if emery be iron ore and corundum, (as stated by the United States Government Report), will it not pay you to use our pure Craig Mine Crystal Corundum? It is not adulterated with emery.

Write for Prices.

The **Canada Corundum Company, Limited**
TORONTO, CANADA.

CONDENSED MACHINERY ADVERTISEMENTS.

of machinery. They have similarly equipped a number of other smaller concerns. With the services of Mr. Vogan, well known as the originator of classified designs in metal ceilings and side walls, who carefully inspects the casting of all the company's ceiling and ornamental cast dies, the Canton Foundry & Machine Co. are enabled to do the best kind of work of this character at the least possible cost. They are the only factory making a specialty of equipping concerns with complete plants for the manufacture of ceilings and ornamental sheet metal work from the beginning, thus saving them the time and expense of experimentation. The company state that they have now got down to a point where they can install a complete metal ceiling outfit, with classified designs, for a couple of thousand dollars; whereas formerly it used to cost many thousands of dollars for unclassified designs. The concern claim that they are doing their best to advance the art of metal ceiling manufacture in the same manner as the Universal Machine Works, of which they are the proprietors, did in starting the manufacture of conductor pipe and eave trough machinery. The success of the last named branch of industry is patent from the fact that nowadays almost every one has long length conductor pipe and eave trough on their buildings. —Metal Worker.

Machinery and Electrical Notes.

A new convent is being built at Outremont, Que., which, when finished, will be one of the most elaborate in America. It is to have a complete service plant, power house and full electrical equipment. The work for the installation of this and for the alterations in the Mount St. Louis Institute, Montreal, is in the hands of the Standard Construction Co., of Montreal.

The event of the year in electric lighting circles will be the annual convention of the National Electric Light Association, which will be held in Boston, May 24, 25 and 26.

The Frost & Wood Co., of Smith's Falls, Ont., manufacturers of agricultural implements, are about to move the plant of the Coulthard, Scott Co., of Oshawa, acquired by them about a year ago, to Smith's Falls, to become part of their main plant in the latter town. This will mean also the transferring of between 75 and 100 men from Oshawa.

The International Engineering Congress, which has been organized, and will meet at St. Louis from Oct. 3 to 8, in conjunction with the St. Louis Exposition, will be of considerable importance in engineering circles. Engineers specially qualified in the different branches have been asked to prepare a review of the subject covering the development for the past ten years, together with a summary of present practice. The subjects discussed will include everything in the engineering and machinery line, some of the subjects being, the manufacture of steel, tests of materials of construction, turbines and water wheels, dredges, hoisting and pumping machinery, passenger elevators, locomotives, etc.

MACHINERY WANTED.

Notices under this heading inserted free for subscribers to **HARDWARE AND METAL**.

DRY KILN APPARATUS—for small heading mill; must be cheap and in good repair. Box 18, **HARDWARE AND METAL**, Toronto.

LATHE, screw cutting, about twelve-inch swing; must be in good order. Box M. 10, **HARDWARE AND METAL**, Toronto.

MINING tools wanted, steam pump or ejector, forge, hammers, sledge, 1-in. steel, etc. Box 15, **HARDWARE AND METAL**, Toronto.

STEAM ENGINE WANTED—About 7 h.p., stationary. Address, with particulars and lowest price, Box M 12, **HARDWARE AND METAL**, Toronto.

TO BUY. One small gasoline engine, about one horse power, for small yacht. J. J. Turner & Sons, tent manufacturers, Peterboro, Ont.

WANTED—18-in. turret lathe; second-hand, if in good condition. Box M 13, **HARDWARE AND METAL**, Toronto.

WANTED—Second-hand gasoline engine—in good repair; 2 to 4 horsepower. Box 8, Markham.

WANTED—Immediately—Portable sawmill—to cut from three to five million feet mixed timber, principally birch; would prefer party who would take timber from stump and deliver lumber at station. Hanna & Hutcheson Bros., Huntsville, Ont.

WANTED—Good second-hand jointer and rounder. E. McNabb, Arva P. O., Ont.

WANTED—Hydraulic press; capacity at least 200 tons. Address, giving size and full particulars, to Box M 11, **HARDWARE AND METAL**, Toronto.

MACHINERY FOR SALE.

Special rates will be quoted for notices under this heading for periods of three months or longer.

A GASOLINE ENGINE—That has stood the test and proven to be the most economical ever operated in America. Made by Tuerk Iron Works, Berlin, Ont.

ENGINES—Gas, gasoline, stationary and marine. E. Housey, manufacturer; 815 Queen west, Toronto.

ESTIMATES given on forced and induced draft fans for steam plants. Sheldon & Sheldon, Galt.

FOR SALE—Electric table, one motor, six machines, desk, chairs, and other machinery. Apply 85 St. Peter street, Montreal.

GAS and gasoline engines, stationary, marine, automobile; also launches; silver medal, highest award Dominion Exhibition, Toronto; also Toronto Exhibition, 1902; write for catalogue. The Gasoline Engine Co. of Toronto Junction, Limited.

HEAVY portable engines—21 to 50 h. p.; on wheels or skids; for sawmill work; prompt delivery; low prices; send for catalogue. The Robert Bell Engine and Thresher Co., Limited, Seaforth, Ont.

HOISTING ENGINES, derricks, continuous concrete mixers, 250 yards capacity; dump cars, railway construction cars, track-laying tools, boilers, etc. Marsh & Henthorn, Belleville, Ont.

MACHINE TOOLS—I have for immediate delivery a large stock of lathes, planers, shapers, millers, radial and other drills, punches and hammers, bolt cutters, hammers, presses, etc., etc.; send for stock list. H. W. Petrie, Toronto.

NEW STATIONARY ENGINES—20 x 24 Waterous sawmill engine; 14 x 18 Waterous sawmill engine; 9 x 10 McEwen engine; 13 x 14 McEwen engine. Waterous, Brantford.

NORTHERN IRON WORKS, Winnipeg—New Barnes lathe, 13-in. swing, 7 ft. bed; in perfect condition, cheap; Porter lathe, 14-in. swing, 6 ft. bed; almost new; bargain; new shaper, 16 x 20, and countershaft; best make; cheap.

NORTHERN IRON WORKS, Winnipeg—Steam plant, consisting of a famous Buckeye high speed automatic 50 h. p. engine, Leonard return tubular boiler 70 h. p., smoke stack and steam pump; a bargain is offered for quick sale. This is a first-class outfit, and our price is away down low.

ROCK DRILLS for waterworks excavating, quarries and mines; steam hoists for builders, mines and quarries; simple, compound and triple marine engines, for pleasure launches. The Dominion Rock Drill Co., Napanee, Ont.

THE A. R. WILLIAMS MACHINERY CO., Limited, Toronto, have for sale for prompt shipment the following: Two 10" four side moulders, new; 42" new sand papering machine; new 40" Cowan resaw machine. Send for prices.

THE FAIRBANKS CO.—Temporary warehouse, 124 Bay—standard scales, valves, trucks, letter presses, shafting, hangers, pulleys, belting, mill supplies, machine tools; "Fairbanks" gas and gasoline engines; write for price list.

THE STUART MACHINERY CO., Winnipeg—One 50-light dynamo, direct connection with gasoline engine; 20 electric motors and dynamos, from 1/4 horse power to 1,000 lights; sole agents for McGregor-Gourlay's iron-working and wood-working machinery.

AGENCY WANTED.

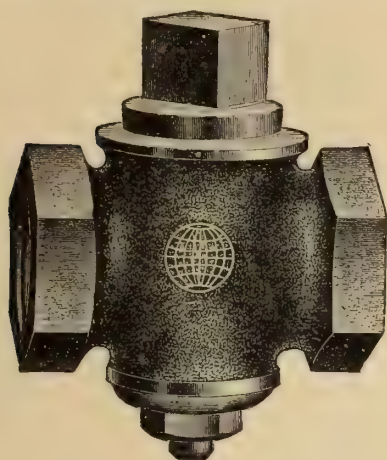
WANTED—To secure agency in Manitoba town for modern gasoline engine; state terms and commission. Box M 14, **HARDWARE AND METAL**, Toronto.

SITUATIONS VACANT.

ELECTRICIAN WANTED—Hespeler municipal electric light plant; must be able to do line work; all night system; steady man wanted; state experience and salary wanted. J. W. Christman, chairman electric light plant, Hespeler.

A 1 LATHE HAND—In first-class shop; young man preferred; state references and give wages expected. Box 19, **HARDWARE AND METAL**, Toronto.

"GLOBE"
STEAM and GAS
COCKS.
"GUARANTEED SATISFACTORY."



Catalogue "C" and Discount
Sheet on application.

The Globe Brass Works
Detroit, U.S.A.

MADE IN CANADA



Threshermen, Attention!

The Threshing belt that gives the greatest
satisfaction is the "MAPLE LEAF"

**Stitched Cotton
Duck Belt**

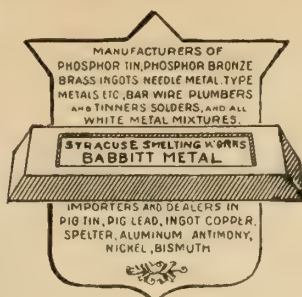
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DOMINION BELTING COMPANY
Limited
HAMILTON, ONTARIO.

Ask your dealer for it and take no other.

Beware of Imitations

Our "MAPLE LEAF" Belt Dressing is the
best on the market—made only by us.



**Manganese
Anti-Friction Metal**

is the most reliable and
durable Babbitt Metal
made.

Price 18c. per lb. Every
pound guaranteed.

On sample orders of 100
lbs. or over we pay freight.

Syracuse Smelting Works,

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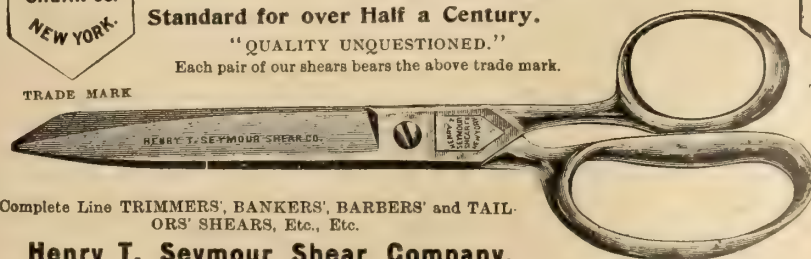
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WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.



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card.

A QUESTION OF LATHE QUALITY.

IN the question raised by "Machinist" in Hardware and Metal two weeks ago regarding engine lathe qualities, much interest has been taken by machinery users, as well as the builders in Canada and the United States. In addition to the several valuable opinions published last week, the following views of representative machinists or machinery dealers are worthy of attention:

THE GURNEY FOUNDRY CO.

The Gurney Foundry Co., Toronto, have several engine lathes installed in their plant built by the John Bertram & Sons Co., Limited, Dundas, Ont., and W. H. Carrick, vice-president of the works, says that they are giving excellent satisfaction, and that they are doing an equal amount of work with as good results as any American lathe in the works.

"We consider," said Mr. Carrick, "that the lathe manufactured by the John Bertram & Sons Co. is the best Canadian-built tool, and we also think that that firm's lathe is as good in regard to workmanship and accuracy as any American-built lathe of the same pretensions."

"Do Bertram & Sons build lathes for special work?"

"Yes, to a certain extent they do. We have had some lathes built by them specially for our work, and the contract has been excellently executed. However, quite recently we had some lathes of special design installed which we purchased in the States. This was done for the reason that we were in a hurry and could not wait for Bertram & Sons to manufacture them, and so we went to an American firm who kept in stock the very design of lathe we wanted. Therein do the American builders have a great advantage over the Canadian builders. The American market is so large that builders can afford to establish immense plants where one line of lathes is specialized in, and consequently that firm can produce that special lathe at a much less cost than a firm who do not specialize in that kind of lathes can. Therefore, although Bertram & Sons could turn out as efficient a lathe of special design, if the patterns differ from the ordinary engine lathe it does not pay them, since they have special patterns to make. But where the difference is not very great, Bertram & Sons have succeeded in producing a lathe which is giving us as good satisfaction as the American lathes of the same kind give."

THE POLSON IRON WORKS.

F. Polson, of the Polson Iron Works, Toronto, when asked to give an opinion

concerning the best lathe on the Canadian market, said:

"Take the ordinary engine lathe in common use in machine shop and foundry, I consider that there is no better manufactured than that of the John Bertram & Sons Co., Limited, Dundas.

"As to the question of the comparative value of Canadian and American-built lathes, there are two ways of answering it. As I have said, the Bertram lathe equals any ordinary engine lathe manufactured, but for lathes of special design, the Canadian builders cannot compete with American, for the very evident reason that the American market warrants the installation of an immense plant of special machinery for the manufacture of a special line of tools, and therefore it would not pay Canadian firms to build a special tool by contract, since they could not produce it at the cost necessary in order to compete with American firms."

"How does the price of American lathes of ordinary type compare with that of Canadian?"

"Well, the Canadian builder keeps up his price as close to the American as he can and secure sales."

THE BERTRAM ENGINE WORKS.

Mr. R. Bertram, of the Bertram Engine Works Co., Limited, Toronto, says that there can be but little doubt that you can get as true, accurate and efficient a lathe of the common engine type from the John Bertram & Sons Co., Limited, Dundas, as is to be had.

"We have them installed," said Mr. Bertram, "and we have never had any trouble with them, either on account of inaccuracy in design or finish, or because of their not being up to their specifications. We have had trouble with other Canadian-built lathes, but not with the Bertram. Then comparing the American and Canadian common engine lathe, we have found that Canadian give as good satisfaction as American. Then, too, Bertram & Sons will put special appliances on a lathe on contract, and there can be but little doubt that you can get as true and accurate a lathe for ordinary purposes from John Bertram & Sons as from any manufacturer in the States.

"Of course Canadian builders do not attempt the building of the variety of lathes that the American builders do, for the simple reason that the Canadian market does not demand them in sufficient numbers to warrant the outlay of capital necessary for the carrying them in stock, but if you wish it you can have a lathe suited to your special needs made by contract."

THE CANADA MACHINERY AGENCY.

W. H. Nolan, of the Canada Machinery Agency, Montreal, said in answer to a question of the relative merit of different makes of lathes:

"American makers pay attention to details and improvements to a greater extent than Canadians, and therefore in a general way American lathes are better than Canadian. As far as Canadian machines are concerned, I consider the John Bertram lathe the best made in this country. Some manufacturers seem to be prejudiced in favor of American lathes, but there is no reason why this should be so."

WILLIAMS & WILSON.

F. C. Wilson, of Williams & Wilson, Montreal, expressed his opinion thus:

"The subject of the relative merit of American and Canadian lathes is a broad one. Since the Canadian lathe is modelled to some extent after the American pattern, there is no doubt that the best American lathe is superior to the best Canadian, but many of the latter are away ahead of numerous American makes. Taking them all through, the average Canadian lathe can be relied upon, and besides, some excellent machines are made in Canada."

MONTREAL MACHINERY EXCHANGE.

Alfred Rubbra, proprietor of the Machinery Exchange, Montreal, in discussing the question of lathe quality with a representative of Hardware and Metal, said:

"As a man of twenty years' experience in connection with machine tools, I can safely say that Canadian-made lathes are equal in every respect both as regards efficiency, accuracy and durability, to the American makes of the same class. There is no doubt the Americans put a higher finish on their machine, but the general machinist does not look for finish. What he wants is an accurate, up-to-date machine. There is no reason to suppose that the American machinist is endowed with greater brains than the Canadian. I handle both makes and so am not wedded to either. I think the reason why so many American tools are used in manufacturing in Canada, is because the superintendents of these concerns are for the most part Americans who are consequently accustomed to American tools, and when ordering generally specify a certain make. Of course in large concerns, where they can devote a whole shop to one make of tool, there is naturally more refinement in manufacture, as is the case with some of the largest American works."

J. F. M'GOUN.

J. F. McGoun, machine shop instructor at McGill University, says:

MACHINE SHOP VENTILATION.

By J. C. A.

"In working with lathes of all patterns and makes, I find the American machines surpass the Canadian, both in design and finish. They lend themselves better to different kinds of work, and are much easier to manipulate. We have both kinds here, and there is no doubt the Canadian lathes are good ones, but as far as I am concerned, I would rather work with American."

JOHN WATSON IRON WORKS.

The opinion of A. McKenzie, superintendent of John Watson Iron Works, Montreal, is directly opposite to that of J. F. McGouni. He says:

"As far as my experience goes, and it has been varied, I contend that the lathe built by John Bertram & Sons' Co. to-day and put on the market by them, is as good for ordinary practice as any lathe manufactured. If I were installing new machines I would ask for nothing better than this make, as they have always given good satisfaction, and are thoroughly reliable and accurate. The Americans make a higher class of lathe, and a more expensive one, but for every-day shop work, the Canadian lathe is all sufficient."

HENDERSON ROLLER BEARING CO.

Mr. R. I. Henderson, manager of the Henderson Roller Bearing Mfg Co., Limited, in answer to Hardware and Metal's enquiry concerning the relative value of Canadian and American lathes, said that engine lathes for heavy work built in Canada were quite as efficient and accurate as American lathes of the same class. The same, however, he was sorry to say, could not be said of light engine or tool-room lathes. The Canadian builder up to the present had not been turning out as efficient a lathe for light work as his American competitor. This, Mr. Henderson thought, was much to be deplored.

"Our manufacturing industries are growing to such an extent," said he, "that we should have nothing but the best tool, both as to workmanship and efficiency. What Canadian manufacturing firm does not wish to support home industries? But this at present is impossible, as we cannot get at home the tools suited to our work." In an up-to-date Canadian factory the appearance of a lathe counts for something, but the simplifying of work and saving of time is of greater importance. On the American tool lathes we have the instantaneous gear change and thread cutting device, which on certain classes of work has almost doubled the capacity of the lathe. This device up to the present has not been introduced on Canadian-made lathes."

Mr. Henderson went on to say that if the Canadian manufacturers would turn out an up-to-date light engine lathe and tool lathe they would have no trouble in disposing of them, as hundreds of American tools are brought into Canada yearly.

THE absolute necessity for providing an adequate system of ventilation of public buildings is being recognized more and more each year, and as a consequence more attention is being paid to it. If it is necessary that public buildings have a good ventilating system, how much more is it necessary that a workshop, where the workmen spend so many hours of the day should have a good system. Fresh air is necessary to maintain the bodily vigor and alertness of the workmen. If instead of fresh air they breathe over and over again the same air, they will become exhausted and lose interest in their work. This good ventilation of shops is not only necessary to the health of the workmen, but it is also a source of economy, since the men keep the vigor necessary to perform their work with alertness and enthusiasm throughout the whole day.

Then, of course, in Winter the shops have to be heated, and to secure the best system of heating and ventilating, one should depend on the other; that is, the system should be a combined system of heating and ventilating. A few words regarding the placement of the fresh air inlet and the foul air outlet, and best way of heating the air for the shops would not be out of place.

The air, as it is expelled from a person's lungs, is warmer than the surrounding air, and, therefore, tends to rise. However, since this air is laden with impurities, such as carbon dioxide, it is at the same temperature heavier than ordinary fresh air. Now, the air is expelled from the nostrils in a downward direction, and, therefore, will continue in that direction for a certain time, and at the same time is being rapidly cooled to the temperature of the surrounding air. Therefore, by the time its downward velocity is overcome, and its lightness has asserted itself and it begins to rise, in all probability it will have been cooled to the temperature of the room, and will again begin to fall.

From this consideration it would prove the best policy to have the foul air outlets near the floor, provided that a current of cold air is not entering at the floor, and there were a draft crevice is quite evident, since the cold air is heavier than the impure air at the ordinary temperature of the room and, consequently, if both the cold air inlet and the foul air outlet were at the floor, and there were a draft created, the outlet would not be a foul air outlet at all, but a cold air outlet,

since the cold air would form a steady stream from inlet to outlet.

If the outlet is to be at the floor, the inlet should be half way up the wall of the shop, where a draft should be created; perhaps the best way for an ordinary machine shop being by use of a fan. Then to consider the heating problem, it is very desirable, both from the heating and from ventilation standpoint, that the air as it enters should be raised to a certain temperature, not necessarily to the temperature desired for the shop, but high enough so that its heaviness will not cause it at once to drop to the floor. This heating can be done by having the air as it enters pass through a set of steam or hot water coils. After the air has entered it may be raised to the desired temperature for working in by direct radiation from steam or hot water pipes.

By having the fresh air inlet half way up the wall of the shop it is possible to obtain the greatest heating efficiency from these pipes arranged along the wall high up from the floor, whereas if the cold air intake were at the floor it would necessitate the pipes being arranged along the wall at the floor.

For very apparent reasons it is much more desirable that the pipes be some distance from the floor in a machine shop. The best of these reasons is that the tools are generally arranged near the windows and, therefore, near the wall, and if there were a row of steam or hot water pipes along the wall next the floor it would not be very comfortable for the operators of these machines.

In arranging a heating and ventilating system in a machine shop it is only necessary that a few of the common laws of ventilating should be followed, and that good commonsense is displayed in the arrangement of the system, so that one good point may not be spoiled by the application of another, which does not suit the system being carried out.

A Favorable Annual Report.

The third annual report of the Montreal Light, Heat and Power Co., Montreal, has been given out. The net profits of the company for the past year are \$884,015.85, this being greater in amount by \$165,346.34 than the profits for the previous year. The installation of the new purifying and oil gas plant at the Elm Station works have been completed. The work of standardizing and unifying the electrical department has been going on during the year with satisfactory results. During the year 34,501 incandescent, 155 commercial, 50 street lights and 210 motors, equivalent to 2,303 h.p., have been added to the company's circuit. There were also installed 2,895 gas, 983 electric metres, 1,949 gas stoves and 1,091 new services.

ELECTRICAL GOODS AND SUPPLIES

A New Illuminant.

A NEW lamp is about to be placed on the market that bids fair to rival the electric arc now in use; in fact, to do away with carbon lamps altogether. The announcement comes from no less an authority than C. P. Steinmetz, which fact ensures its reliability. It is known as the Magnetite arc, and is the outcome of several years experimenting in the laboratories of the General Electric Co. The electrodes of powdered magnetite, mixed with some substance used as a restrainer, are made in cylinders, the same as the carbon. In the case of the carbon the light comes from the crater of the positive carbon, while with the magnetite arc, which is from 3-4 to 1 1-8 inches long, light is given out by the arc itself. This gives a much greater volume of light, which is white and perfectly steady. Another feature of the lamp is long life, as in ordinary street lighting it will burn a month without trimming, and thus requiring very little attention. The mechanism of the lamp is also different. The carbon arc lamp is arranged so that the carbon floats with a definite adjusted distance between carbon points, which is from three-eighths to seven-sixteenths of an inch. The feeding mechanism of this lamp is much simpler. When the power is put on the lamp the arc is struck by separating the electrodes to a definite distance, and then they are locked in this position until after some hours, when by the consumption of the electrode the arc lengths, and therefore the arc voltage, become higher, and when it has reached a sufficient point it operates the feeding mechanism which restores the arc to its original length.

Two Good Lines.

THERE are two exceptionally good and profitable lines among electrical supplies that the hardware merchant would do well to handle, even though he should decide not to go extensively into the business. These are electric fans and electric bells. The

season is just about to open when the demand for the former should be great, and the very fact of having a few in stock should create a demand. A few of these on hand and kept running at convenient points in the store would soon show other merchants their value, when they notice how cool and inviting the store is, compared with theirs. The very fact of having electric fans running, producing an agreeable atmosphere, is an attraction to customers in the warm days of Summer. It is altogether likely that the hardware merchant knows the voltage of the lighting circuit in his town, and whether the system used is direct or alternating current, but if he does not these should be found out before he places an order. The installation of an electric fan is as simple as putting a lamp in a socket; for, in fact, that is all that is done, when the cord and plug are supplied with the fan. Electric bells are, or should be, a staple, and ought to be kept in stock the same as other lines of door bells. There is no particular season for them, but no doubt a steady demand would be created all the year round. The setting up of an electric bell requires no knowledge of electricity or its action, and the matter could well be taken in hand by the energetic apprentice, who would, no doubt, take a special pride in such work.

A Mighty Waterfall.

THE World's Greatest Waterfall" is the title of a descriptive article in Pearson's (English) for May. This wonderful natural phenomenon, known as the Victoria Falls, occurs on the Zambesi River in Central Africa, and was discovered by Livingstone in 1854. "Only by comparisons can any idea be given of the grandeur of Zambesi's fall. Anyone who has seen Niagara may gain some little notion of its unknown, untamed, unspoiled rival by imagining something nearly twice and a-half as high and twice as wide. And, as this is a practical age, a comparison of the amount of horse-power running away in each

case is interesting. Niagara's horse-power is 7,000,000; the Victoria Falls allow 30,000,000 horse-power to run to picturesque waste."

As the Cape to Cairo Railway is to cross the gorge of the Zambesi just below the falls, a bridge has been projected and is now being built. "The span of the bridge's arch will be 500 feet, and the height 400 feet above the river—so that the bridge will be the highest in the world. It is to be built out from either bank of the ravine until the steel-work of the arch meets in the centre, for there is no room for scaffolding."

"The building of the bridge is not the only engineering work that Cecil Rhodes' great schemes have involved with regard to the Victoria Falls. For the 30,000,000 horse-power now running to waste is shortly to be harnessed and applied to the development of the country in the near neighborhood—a country which is more richly endowed with minerals than any other equal area in the world."

Large Copper Wire Order.

The largest order for copper wire that has ever been given in Canada has just been received by the Dominion Wire Manufacturing Co., in the face of keen competition between Canadian and American manufacturers. A. E. Hanna, secretary-treasurer of the company, has recently returned from a trip west, where he was successful in securing this large contract. The wire is for the Toronto-Niagara Power Co., and consists of 500 miles of stranded cable, about half-inch, weighing about one and one-half million pounds, and having a value of about a-quarter of a million dollars. It will furnish six transmission lines, connecting Toronto and Niagara Falls, to supply power to the former.

This makes the third time that this company has secured the largest contract, up to the time that has been given out in the Dominion. The previous ones were both for the C. P. R. Telegraph Co., one for 1,400 miles of copper wire, and the other one for 3,000 miles of wire for telegraphic communication.

This Awning is 50 ft. long. Has been used four seasons, and has needed no repairs.

Our Awnings are the best made in Canada.



We make Roller Awnings for Store Fronts 12 feet to 100 feet, operated from one end, requiring only a boy's strength.

THE AWNING ON THE STORE FRONT OF RYRIE BROS., THE LARGEST JEWELLERY HOUSE IN CANADA.

WE MAKE AWNINGS FOR STORE FRONTS, HOUSES AND OFFICES.

EXAMPLES OF WORK DONE IN TORONTO: AWNINGS USED BY GRAND & TOY, STATIONERS; WALKER & CO., DRY GOODS; THE WM. DAVIES CO., LIMITED, PROVISIONERS (WE DO ALL THE WORK OF THIS FIRM IN WINDOW SHADES AND AWNINGS—37 STORES); THE NASMITH CO., LIMITED, CATERERS—20 BRANCHES. SEND FOR A QUOTATION.

WILLIAM BARTLETT & SON, 16 Adelaide St. W., Toronto

Business Changes

ONTARIO.

Fire damaged the premises of H. Lindop, planing miller, St. Thomas.

It is reported that J. Westron, hardware dealer, Haileybury, has sold out.

Farrell & Gallagher, plumbers, Sault Ste. Marie, have been succeeded by J. E. Farrell.

Fire damaged the premises of the Toronto Woolen Machinery Co.; insurance covers the loss.

The Boston Wood Rim Co., Limited, Toronto, have assigned to the National Trust Co., Limited.

McDonald & McCrary, hardware deal-

ers, Florence, have been succeeded by McDonald & Wells.

QUEBEC.

The Standard Foundry Co., Longueuil, have sold out to M. Ameys.

The International Electric Co., Montreal, have been registered.

Beauvais Freres, hardware dealers, Montreal, have been registered.

Fire damaged the premises of J. Beckett, Sr., carriage maker, Shawville.

L. A. Nobert, hardware dealer, Louiseville, has obtained an extension.

The assets of E. Lemire, carriage maker, Pont De Maskinonge, have been sold.

S. H. Young, chief agent of the Canadian Bridge Co., Limited, Montreal, has been registered.

MANITOBA AND N.W.T.

Henry & Parr, harness makers, Grand View, have dissolved partnership.

W. W. McCubbin, hardware dealer, Nesbitt, has sold out to W. R. Middlemiss.

W. C. Bond & Co., hardware merchants, Plumas, have sold out to A. S. Hare.

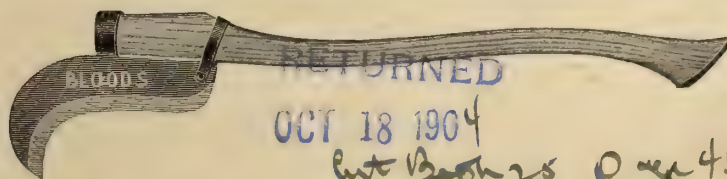
W. B. Lennard, hardware merchant, Langenburg, has been succeeded by W. Denmark.

The business of W. Murray, hardware dealer, Alameda, is advertised for sale by mortgage.

BRITISH COLUMBIA.

G. R. C. Taylor, brick manufacturer, Cranbrook, has been succeeded by Taylor & Davis.

The popularity with the trade of the BLOODS CHAMPION Bush Hooks is due to the merits they possess.



Made from High Carbon Steel, carefully tempered and well finished, with selected hickory handles. The peculiar shape of the blade reinforces each part, making a strong tool throughout.

No.	Size.	Weight without handle.	Length of handle.
9	Light	1 lb. 8 oz.	34 inches
10	Medium	1 lb. 12 oz.	34 "
11	Heavy	2 lb. 4 oz.	34 "

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THE AMERICAN AXE & TOOL CO., INC.
Canadian Sales Office, - - - Coristine Building, Montreal. P.Q.

A WHOLESALE HARDWARE FIRM IN A RINK.

SINCE the big Toronto fire a subject of frequent comment has been the manner in which the largest sufferers met the crisis resulting from the entire destruction of their stock at one

goods a full stock was speedily assembled, and in a few days sorting orders were being filled largely from the new warehouse. Such goods as were not in stock were sent on from the fac-

should be in every way as complete as was the case in the old premises. Manufacturers in all parts of Ontario, in the other provinces, throughout the United States, in Great Britain and in other European markets were communicated with and all, with hardly an exception, have evidently made an especial effort to send their goods along promptly. Consequently there has been a constant pouring in of all hardware lines. From the accompanying illustrations the trade will understand how wide-reaching has been the operations which have resulted in the assembling of such a large and varied stock as that shown.

The upper view shows the desolation which now marks the block in which the warehouse of H. S. Howland, Sons & Co. stood for years. The lower view on this page shows the method of arranging small shelf goods at one corner of the rink. The larger views on the opposite page give a fairly good impression of the magnitude of the area now covered for the first time with hardware stock.

In addition to the space shown the rink provides office accommodation on the first floor, and a room on the ground floor, which is rapidly filling up



H. S. Howland, Sons & Co.—Premises destroyed by fire, April 19.

of the busiest seasons of the year. Inside of twenty-four hours many of the firms were out seeking new premises, and in less than a week some of them had gathered together a stock of quite respectable proportions.

A striking instance of this quality of enterprise and extensive connection is furnished by the experience of H. S. Howland, Sons & Co., whose premises on Front street west were included in the fireswept area.

Soon after the fire this firm started to seek new premises, to order a complete new stock, to make arrangements for filling orders in hand, and to accept new orders from their customers all over Canada. Mention has been made in these columns of the remarkably short time in which all this was accomplished.

Cowan Avenue Rink, which was secured by the firm, has since April 19 been a centre of exceptional activity. By their energy in sending orders to the manufacturers, and the co-operation of the latter in promptly delivering the



H. S. Howland, Sons & Co.—A corner of present premises.

atories as fast as orders were received.

From the first, however, there has been no let up in the energy directed towards gathering together a stock that

with cutlery of all descriptions, while a small building has been built on the north side, in which heavy hardware lines are kept in stock.

June 4, 1904

HARDWARE AND METAL



H. S. Howland, Sons & Co.,—Two Views of the Cowan Ave. Rink Warehouse.

Silverware that Sells.

WHEN YOU SELL SILVERWARE

Sell something absolutely satisfactory and reliable. Avoid "cheap" silverware. You can repose complete confidence in every article bearing our trade mark.

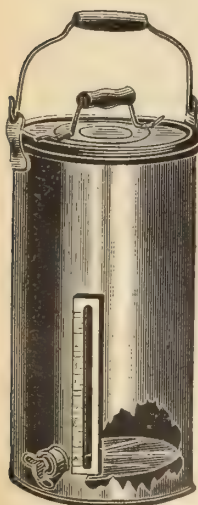
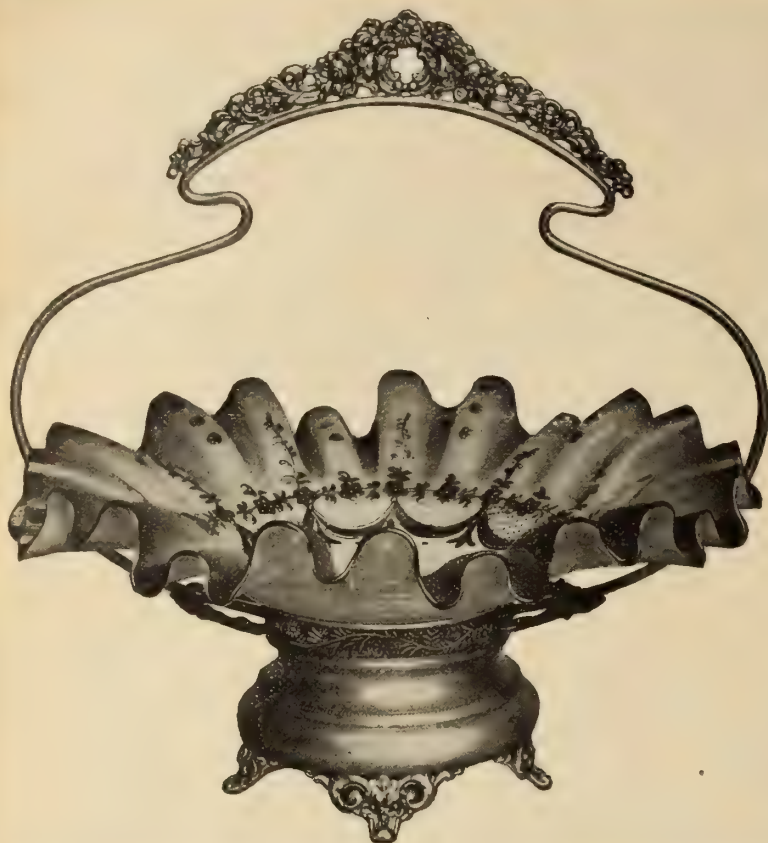
The Britannia or Base Metal is hard and of highest quality.

The Electroplate is of Sterling Silver, generously applied.

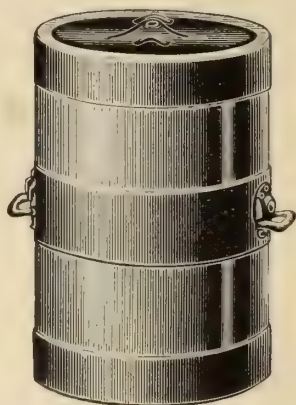
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Send for our large and handsomely illustrated Catalogue—FREE

THE STANDARD SILVER CO., Limited,
Hayter St., TORONTO.



**Creamery
Cans**



**Milk
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**Samson
Dairy
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**Dufferin
Dairy
Pails**

These goods are now moving rapidly in all districts.
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CHEAPER GAS.

JUST at a time when the subject of cheaper gas is in the minds of all consumers of it, and active discussions thereon are taking place in municipal councils, it is interesting to notice the entrance of a new factor in the situation. It is none other than the introduction into the country of separate gas generating plants. Several installations of the same have recently been made, which are said to be the first in America. The question that naturally arises is, Can these be operated at a cost enough lower than the present price to actually warrant their introduction? From figures published elsewhere in this issue of Hardware and Metal, there seems to be no doubt that such is the case. Whether the gas is required for power for manufacturing, or to generate electricity for lighting, the cost is only a fraction of that charged by the companies for gas or electric power. The actual cost of electric power in Montreal is about \$80 per horse-power year, for small powers. It

is claimed that with a gas generator power it is available at less than \$10 a h.p. year, which is a startling difference. A general introduction of these in large buildings and manufacturing concerns would do more to lower prices than a dozen closed sessions of committee, and much more effectively. Anything of this kind ought to be hailed with delight by those who are daily lamenting the high prices paid to monopolies, and there is no doubt that the effect of this innovation will be felt sooner or later. Consumers are pretty well tired paying the demanded prices for light and power, but it remains for the future to tell what reception will be accorded these plants, and to what extent they will affect prices.

TRADING STAMPS.

IT would seem as if the City Council of Montreal, as well as the Legislature of the Province of Quebec, have been exercising themselves over something which does not warrant the pains they have taken. For instance, it may be either wise or foolish to issue or receive trading stamps, and there may be better and more attractive means of giving a discount for cash. The legality of the business, however, is not open for discussion, except by the courts. Senator Dandurand, acting in behalf of the Traders' Advertising Company, made the interesting statement last week before Judge Mathieu that there are twenty-five thousand families in the City of Montreal alone who have books of cash receipts, which means that nearly half the entire City of Montreal is interested.

No sooner had the City Council passed a by-law regarding trading stamps than the Traders' Advertising Company immediately set to work and obtained an injunction to prevent it from being put into force. Usually thirty days' notice is given before the enactment of a new by-law. The city attorneys, evidently, were arbitrary, and claimed that the charter allowed special action in this case. Judge Mathieu was of a different opinion. The argument of the

counsel of the Trading Stamp Company was, that by not following the usual rule of giving thirty days' notice of the adoption of a by-law, the city would injure this large number of families who held books of stamps partly filled, and which were retained solely in the anticipation of redemption. Mr. Dandurand impugned the constitutionality of the Act, by which the city is authorized to pass such a by-law, and claimed that the matter came within the jurisdiction of the Federal Parliament only. It is well-known that Provincial Legislatures have been put in control of the administration of justice, and also distinctly in control of municipal institutions. Is it possible that the Local Legislature has not the prerogative of allowing the City of Montreal to pass a by-law? If so, our laws cannot legally be enforced. At any rate, the injunction against the city has been granted, and the whole business will have to go through the courts again.

The City Council of Montreal apparently exercised very little care in the first place. Who was it that advised the aldermen in respect to the forty dollars, imposed, according to the first by-law, when it should have been twenty dollars? It is odd that with five aldermen who are grocers, and thoroughly know the trading stamp business, the city council should have been so ill-advised by the City Attorney regarding as important an issue as the suppression of trading stamps. The weakest point in the argument of the aldermen was that trading stamps had been suppressed in other places, which is really no argument at all. It is only fair to say that the objection to the stamps, however good, or however ill they may be, has been raised by dealers who do not use them. Merchants claim that the tendency is to create monopolies, and that certain dealers using the stamps attract customers to their trade exclusively. There is another point which has not been mentioned, namely, that large numbers of merchants in Montreal are quite indifferent as to whether others use trading stamps or give away sovereigns. It is

surprising, however, to learn that such a large number of grocers use the stamps and that some thousands of buyers want them. How the whole thing will end is hard to say, but as far as the city council is concerned, a large number of grocers feel that they are quite able to fight their own battles.

AMERICAN MACHINERY IN CANADA.

CANADIAN manufacturers of machine-tools are about the first of the Canadian industries to feel the effect of the industrial depression in the United States. For some time the competition of American machinery houses has been keen, and during the last fortnight or so the presence in Canada of representatives of two of the largest and most conservative firms in the United States has added materially to the sharpness of competition.

The most serious feature of this competition, at least as far as Canadian tool builders are concerned, is the cutting of prices; rather the "slaughtering" of the United States tools on this market. It is customary in the United States to make a discount of 10 per cent. on orders for export, and an extra 2 1-2 per cent. on orders for Canada, the extra 2 1-2 off being to offset the saving in packing, as compared with boxing for ocean shipment.

This, we have said, is customary; but in times of depression one may look for even more than is customary. It is stated, on what seems reliable authority, that discounts to the extent of 10 and 2 1-2 and 25 per cent., or about 34 per cent. straight, are given on large orders of United States machine-tools for Canada.

Thus, with competitors in the field who, on a normal market, are so busy with domestic trade, that they pay no attention to foreign, and with prices being cut in wholesale fashion, the Canadian machinery firms are convinced that depression in the United States is not a good thing for Canada.

Charges of undervaluation at the customs are made, but where values are so

susceptible to change as in the United States machinery market to-day, Government officials cannot be blamed if they in some cases are not able to cope with the importers who have been able to secure discounts of 30 per cent. or more.

AN OPPORTUNE STRIKE.

The strike at the works of the Dominion Iron and Steel Co., Sydney, N. S., which includes 1,700 out of 2,000 men, will not seriously inconvenience that company. The iron and steel market has been lacking in strength for some time, so it is probable that instead of being handicapped by a limitation of the production, they will be benefited by an opportunity to clear away stock accumulation to make necessary repairs and alterations to the works.

LIABILITY OF BONDED GOODS.

IS a merchant liable to pay duty on imported goods which have been damaged or destroyed while in customs' bond? In view of the fact that a large quantity of bonded goods were destroyed in the Toronto fire, this question is interesting. The section of the Customs' Act of Canada dealing with this subject reads:

"Upon production of satisfactory proof to the Minister of Customs of the actual injury or destruction, in whole or in part, of any goods by accidental fire, or other casualty, while they remained in the custody of the officers of the customs in any customs' warehouse, or while in transportation in bond from one port of entry to another port of entry in Canada, or while within the limits of any port of entry and before they were landed under the supervision of the officers of the customs, the duties on the whole or the part thereof so proved to be injured or destroyed may be abated or refunded; provided that the claim is made within fourteen days after the date of the casualty, and that due appraisalment is made of the goods so alleged to be injured as soon as they can be examined."

There is no provision in the law which would enable the Customs' Department

to refund duty paid on imported goods destroyed by fire after they leave the possession or control of the customs.

CONSERVATIVE BUYING.

Indications point to an active business in Canada during the Summer and Fall seasons of the present year. Yet it would be unwise for hardware merchants to buy heavily in anticipation of such activity. Unfavorable weather and a presidential election are a combination that do much to decrease commercial and industrial activity throughout the United States. Depression there may mean severe competition in many lines of hardware in Canada. This fact should be taken into consideration by manufacturers, jobbers and retailers in their preparations for the Fall trade.

PERSONAL LETTERS.

SOME hardware dealers have adopted the excellent expedient of sending out personal letters to some of their customers.

Where one can take the time and its typewriter (and he can afford to take the time) this is one of the greatest means for securing profitable, paying customers. See that every new contractor and construction company that comes to the town has a personal letter, inviting them to call, inclosing your card, and perhaps making quotations on the lines of goods they will use. It will bring them every time, and in nine cases out of ten they will stay.

A POINT IN ADVERTISING.

The point of advertising is not so much to keep the name of the store in prominence, as to advertise what the store does for its customers and the goods to be found on its counters. If people are interested in these goods—and the only way to interest them is by telling them—they will read the advertisement, and read it through from beginning to end. If your announcement appeals to them, they will follow it to your store and your advertisement has done its work. The matter of actually selling the goods rests on your shoulders.

INTERVIEWS WITH BUSINESS MEN.

Depression in United States.

MR. R. A. Baines, of Baines & Peckover, Toronto, returned on Friday from a trip through the Central West States. Mr. Baines reports that the unfavorable weather of the past Winter has done much toward causing a slackening of the prosperity of former years in those states. "The cessation of business caused by the presidential election in the States will," Mr. Baines says, "do much to complete the effect of the bad weather and to cause general depression there. Manufacturers in the States are already recognizing this condition and are disposed to look to Canada for an outlet for such of their stock as they will be unable to find sale for at home. This will be felt more and more by Canadian manufacturers, and the sooner they recognize the danger of 'slaughtered' goods from the United States the better for themselves."

T. P. Alcock, of Gurney's.

T. P. Alcock, secretary of the Gurney Foundry Co., Limited, Toronto, reports business active. "Our sales are larger than even last year. Business in Ontario and the east is fully as good, if not better, than last year, while the demand from Manitoba and the west is away in excess of any previous year."

"The only proof we need of the prosperity and growth of the Northwest is our business with that country. If you could see the orders that come in from our retail customers in the west you would know how their business is growing. As their business grows our trade expands. Then as new places open up we are getting new customers. We have reason to feel satisfied with the share of business coming to us."

A Retailer's Experience.

Few merchants can trace the history of their business to such a remarkable beginning as can J. D. Smith, hardware merchant, Baysville, Ont. Mr. Smith is a painter and decorator by trade. Up to about a dozen years ago he confined himself to this work, which necessitated his moving about over a wide area. While working on a contract at Bracebridge a boiler explosion at the Baysville saw mill sent the great iron boiler hurtling across the river, crashing through his house and landing many yards beyond.

Fortunately his wife and children, though only by the merest circumstance, were out of the house at the time, but his home was a complete wreck. This made it necessary for him to go to

Baysville and settle down while a new home was built. During this stay he decided to instal a stock of paints, wall papers, window shades, etc., his wife attending to the store when he was away on contract work.

Being a man of energy and enterprise, Mr. Smith added line after line to his stock until to-day he has one of the neatest hardware, etc., stores in any place the size of Baysville in Ontario, while he is recognized as a shrewd and conservative business man by his townsmen as well as by the firms he does business with. He continues to make a specialty of paints, being an "Ark Brand" enthusiast. He is also the "Oxford" stoves representative over a wide area. Mr. Smith is an ardent believer in doing business with one house in each line, and in addition to the lines mentioned is a loyal customer of Wood, Vallance & Co. in general hardware, and of Gowans, Kent & Co. in lamps, etc. In addition to his business as a retailer, he is a justice of the peace and a conveyancer, thus coming in contact with practically all classes in his district. Thus in his residence in Baysville he has won honor as well as a large measure of success.

James Cartland & Son's Representative.

Mr. W. Willis Mitchell, of James Cartland & Son, Birmingham, Eng., is making one of his annual tours through Canada. He is in Toronto this week, and is registered at the King Edward Hotel. Mr. Mitchell has been making an annual tour to Canada for some years. His firm is known the world over for the excellent quality of the brass goods they manufacture. Since Mr. Mitchell was in Toronto last he has visited South Africa in the interest of his firm. In reply to a question by Hardware and Metal, he said that while trade there was undoubtedly quiet, the old established firms there were, as a rule, doing a fairly good business. The firms which had suffered most were the newer enterprises, while the adverse trade conditions were magnified by people who had emigrated there and had been unable to find employment.

Mr. Mitchell is a close observer, sharpened no doubt by his years of travel around the world. He gave some study to the labor question while in South Africa. Generally speaking, he declared himself to be opposed to Asiatic labor. "But," said he, "the conditions are these: The kaffirs will not work, at least in sufficient number to supply the demand for labor. The

average kaffir has several wives to assist in supporting him, and his greatest ambition is to earn enough money to buy mealies sufficient for his family requirements. The Chinamen, on the other hand, are industrious. These Chinamen, when brought to South Africa, are provided with accommodation outside the town, not in the town, and in some instances they are allowed to bring their wives with them. When their term of contract has expired they are sent back to their native land."

"What is your experience with Canadian trade?" asked Hardware and Metal.

"Our experience," he said, "is satisfactory. Our trade is growing. I find a growing sentiment in favor of British goods in Canada and, let me say, not only in Canada but in all British colonies as well. Speaking for our firm, we determined not only to hold the trade that we have, but to secure even a greater share than we now possess, and what is more, we intend to do it on quality. We are doing everything that we can to comply with the conditions of the Canadian market, but we will do it on quality alone, and the manner in which our business is growing proves that it is the proper course to pursue."

While an old firm, James Cartland & Son do not hesitate to adopt whatever new methods will advance their interests. New machinery is continually being put in, and newer designs manufactured. Since Mr. Mitchell was in Canada last year they have made some marked improvements in their factory.

After leaving Toronto Mr. Mitchell will visit Winnipeg, and then return to Great Britain, sailing for home on June 25. He has a great many friends in the trade, and his welcome on this trip has been most cordial.

ORDER FOR FIRE HOSE.

The council has ordered 1,000 feet of Keystone hose from the Canadian Rubber Co. of Montreal through their agents, James Nelson & B. Co.

The above, from a Windsor, Ont., paper, is worthy of the attention of hardware retailers throughout the Dominion. In all probability the majority of municipalities in Canada are not as well equipped with fire hose as they might be. An examination into this matter might enable hardware retailers to secure an order of similar nature, if not equal magnitude, to the one credited to the enterprise of James Nelson & Brother. It is such orders as these that make the total revenue from a retail hardware business a source of satisfaction.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, June 3, 1904.

FOR some weeks the Spring rush in the hardware trade has been continuing with an animated and decidedly brisk tone, but this week, the first time for several past, there is just the slightest indication of a falling off in business. Some dealers, however, report a great activity in nearly all lines, without any diminution whatever in the volume of trade, and the actual amount of business done. Any lessening there may be is no doubt due to the uncertain weather, and to the fact that farmers are too busy to do much trading. This, no doubt, exercises a direct influence on the energy of the retailer, which lessens keenness for ordering, with the result of fewer orders and inquiries being received by the wholesale trade.

There is no change of price reported this week in any of the hardware goods. Although the shortages that were so noticeably felt a few weeks ago are being caught up with to some extent, there is still a shortage in some lines, namely, certain sizes of screws, single-barreled guns in some numbers, and the more commonly used sizes of nails. Import shipments of window glass are arriving, so that dealers are in a good position to fill orders. Business in cement and firebrick is somewhat backward, due to the unsettled state of the weather, and also to labor difficulties. Trade in ice cream freezers is a record breaker this year, and far exceeds that of previous years. The largest order ever given in Canada for copper wire is reported this week. Collections are reported fairly good, and there is a general healthy tone to the hardware market.

Washing Machines—There is a fairly good demand this week. We quote as follows: Round (three legs), \$35.00 per dozen; round (four legs), \$39.00 per dozen; square (regular size), \$42.00 per dozen; square (smaller size), \$36.00 per dozen; round rotary, \$56.00 per dozen; square rotary, \$59.00 per dozen; "New Century," \$72.00 per dozen.

Lawn Mowers—Continued repeat orders are being received for lawn mowers. Prices are the same. We quote as follows: With 8-inch wheel, sizes 12, 14 and 16 inch, \$2.65 each; with 9-inch wheel, size 12, \$3; size 14, \$3.12 1-2; size 16, \$3.25 each; Philadelphia pattern, size 12, \$3.25, size 14, \$3.50; size 16, \$3.75 each; High Wheel, size 12, \$4; 14, \$4.25; 16, \$4.50; 18 \$4.75; 20, \$5.25 each.

Garden Hose—A lively demand is reported, and a brisk trade is being done. Discounts continue: Trade 75 per cent.; Western, 65 and 10 per cent.; White, 40 and 10 per cent.; Maroon, 40 and 10 per cent.; cotton, 60 per cent.

Hose Reels—Trade is exceptionally good, in keeping with other Spring lines. Prices 15 to 25 per cent. higher than last year.

Lawn Sprinklers—Orders for these are still numerous. Prices as before, \$2.50 to \$18 a dozen.

Ice Cream Freezers—This has been a record year for ice cream freezers, more being ordered than ever before. We quote the following range of prices for the leading brands: One quart, \$1.50 to \$1.60 each; 2 quart, \$1.70 to \$1.80 each; 3 quart, \$1.95 to \$2.25 each; 4 quart, \$2.35 to \$2.60 each; 6 quart, \$2.95 to \$3.25 each; 8 quart, \$3.70 to \$4.10 each; 10 quart, \$4.75 to \$5.50 each; 12 quart, \$5.75 to \$6.50 each; 14 quart, \$6.75 to \$7.50 each.

Agricultural Wrenches—There is no new feature in this market. A fair demand.

Harvest Tools—Trade continues the same. Discount as before, 60 per cent.

Spring Hinges—A lively trade is reported. We quote as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—Business is good in heavy screw hooks and hinges this week. Prices the same. Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs; the price of the 6, 8 and 10-inch sizes is \$4.25.

Wire Coat and Hat Hooks—There is an ordinary fair demand for this line. Prices are the same as before, 75c a gross for 3 inch.

Churns—Merely a medium trade being done. Discounts, 40 and 15 per cent. f.o.b. Montreal, and 30 and 15 per cent. f.o.b. factory.

Green Wire Cloth—The demand keeps increasing with the approaching Summer season. The price is as before, \$1.50 per 100 square feet.

Poultry Netting—The market is lively, and a good trade is reported. Discounts for 2-inch 19-gauge standard extras are 60 and 5; for 2-inch 16-gauge, the discounts are 55 and 5 per cent.

Galvanized Poultry Netting Staples—The demand along with poultry netting is reported good. Prices are: Sizes 5-8, 3-4, 1 1-8, 10 lb boxes, \$12.50 list; 25 and 50 lb. boxes, \$12.25 list; 100 lb. boxes, \$12 list. Less 57 1-2 per cent.

Bed Staples—No change this week. Prices continue as before. The discount on the Montreal Rolling Mills Company's and the B. Greening Wire Company's lists is 57 1-2 per cent. The discounts on the Dominion Wire Company's list are 25 and 21-2 per cent.

Blind Staples—No new feature in the market. Discount, 40 per cent.

Galvanized Coil Spring Wire—A fair demand. Our quotations are as follows: Nos. 6, 7 and 8, \$3.20; No. 9, \$2.70; No. 10, \$3.30; No. 11, \$3.35; No. 12, \$2.95; No. 13, \$3.10. Carlots 5 cents less. Freight prepaid is less than carlots to extent of 25 cents and in carlots to the extent of 20c.

Galvanized Wire—Business in galvanized wire is reported good this week. We quote as follows: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11 \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots 12 1-2c extra per 100 lbs will be charged.

Barb Wire—There is still a big demand for barb wire, and no shortage is reported. We quote: \$2.75 per 100 lbs. f. o. b. Montreal, and \$2.50 f. o. b. Cleveland. Carlots of 15 tons \$2.40 f. o. b. Cleveland.

Smooth Steel Wire—There is not much of a market for this line at present. We quote: Bright and annealed, \$2.50 per 100 lb. f.o.b. Montreal, Toronto, Halifax, London, Hamilton and St. John. Net extras per 100 lb are now as follows: Coppered wire, 60c; tinned wire, \$2; oiling, 10c; spring wire, \$1.25; best steel wire, 75c; bright soft-drawn, 15c; hay-baling wire, 20 to 25c.

Annealed Hay Wire—A featureless market. Prices continue the same, with usual discounts.

Fine Steel Wire—Few orders are reported this week. Discounts 25 per cent., with net extras as follows: 1 and 2 lb. hanks, 25c per 100 lbs.; 1-2 lb. hanks, 37 1-2c; 1-4 lb. hanks, 50c.

Brass Wire—Only a small trade is being done in brass wire. Discount as before, 60 per cent.

Copper Wire—Ordinary business is fair this week, while the largest order ever placed in Canada, consisting of 750 tons, was given this week. Discount 60 per cent.

Rivets and Burrs—These are selling well. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per

cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Tinned Roofing Caps—A good trade in tinned roofing caps is reported this week. Price, 6c a lb.

Screws—Although the manufacturers have been able to some extent to catch up with the demand, there is still a shortage in some sizes. The demand keeps up well. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—There is no marked difference in the demand, which continues good. We quote discounts as follows: Carriage bolts common, (\$1) list 3-16 and 1-4 diameter, 60 per cent.; carriage bolts, common (\$1) list, 5-16 and 3-8 diameter, 55 and 5 per cent.; carriage bolts, common (\$1) list, 7-16 diameter and up, 55 per cent.; carriage bolts, full square (\$2.40) list, 60 per cent.; carriage bolts, Norway iron (\$3) list, 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 per cent.; coach screws, cone point, 70 per cent.; nuts, square, all sizes 4c per lb off; nuts, hexagon, all sizes, 4 1-4c per lb off.

Washers, 45 per cent. off.

Cut Nails—Cut nails are somewhat scarce this week in some sizes. There is an active business being done. We quote as before, \$2.30 per keg, f.o.b. Montreal, Hamilton, Toronto and St. John.

Wire Nails—Trade is very brisk, with the supply scarcely up to the demand. We quote the following prices: \$2.40 per keg carlots and \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Pressed Spikes—No change. Discount as before, is 25 per cent.

Horse Shoes—A good active trade is being done in horse shoes this week. Prices continue steady at former figures. Our quotations are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Shoes more than one size in a keg, 10c per keg extra f.o.b. Montreal only.

Horse Nails—Trade is fairly good. We quote: C brand, 40, 10 and 7 1-2 per cent. off list, other brands 55 to 57 1-2 per cent. off list.

Fence Staples—Prices continue as follows: \$3 per 100 lb. keg for galvan-

ized and \$2.80 for bright; 25 to 50 lb. packages, 25c extra.

Boxwood Rules—Discounts continue 52 1-2 to 50 per cent. off list.

Shot Guns—There is a good demand, with still a shortage in some numbers of single-barreled.

Cordage—An active trade is reported this week. We quote as follows: Pure manila, 15c; British pure manila, 12 1-2c; sisal, 12c; double lathyrn, 11c; single lathyrn, 10 1-2c; Russian tarred spunyarn, 13 1-2c; jute rope, 3-8-in in diameter and upwards, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply. Cotton bedcord, 90c to \$1.70, according to length. Sash cord 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Roofing Pitch—Trade is good. No change in price this week, which is \$1 per cwt.

Building Paper—A brisk business is being done in building paper this week. We quote as follows: Tarred felt, \$1.85 per 100 lbs; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Firebricks—The supply is away ahead of the demand, which is none too brisk. English are selling at \$16 to \$22 per 1,000; Scotch, \$17 to \$22.

Cement—Although a good business is being done, it is reported backward, and not up to last year. Prices remain unchanged at former quotations, which are: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex-cars.

PLUMBING GOODS.

Conditions in the plumbing supply trade are much the same as last week. Business continues very active, and with the exception of iron pipe, prices throughout are steady. Some concessions are obtainable on large orders of iron pipe. The city trade is good.

Lead Pipe—There is nothing new to note this week. Trade continues active. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent., f. o. b., Montreal, Toronto, St. John, N.B., and Halifax; f. o. b. London, 15c per 100 lbs. extra; f. o. b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—The market is apparently steady now, discounts quoted being closely followed by the supply houses. Business is of average volume. We quote discounts again, as follows: Light soil pipe, 3 to 6 in., 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8-in, 45 per cent. Light fittings, 2 to 6-in, 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6-in, 60 and 5 per cent.; extra heavy fittings 8-in, 45 per cent.

Iron Pipe and Fittings—We quote: Standard pipe, per 100 feet, in length

under 19 feet—black, 1-8-in, \$2.30; 1-4-in, \$2.30; 3-8-in, \$2.55; 1-2-in, \$2.85; 3-4-in, \$3.65; 1-in, \$5.20; 1 1-4-in, \$7.35; 1 1-2-in, \$8.95; 2-in, \$12.55. Galvanized—1-4-in, \$3.20; 3-8-in, \$3.45; 1-2-in, \$3.90; 3-4-in, \$5; 1-in, \$7.20; 1 1-4-in, \$10.05; 1 1-2-in, \$12.20; 2-in, \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends, are quoted per 100 feet as follows: Black, 1-2-in, \$4.20; 3-4-in, \$5.25; 1-in, \$7.55; 1 1-4-in, \$10.55; 1 1-2-in, \$12.75; 2-in, \$17.60. Galvanized—1-2-in, \$5.25; 3-4-in, \$6.65; 1-in, \$9.55; 1 1-4-in, \$13.25; 1 1-2-in, \$16; 2-in, \$21.90. The discount on all sizes of extra heavy pipe is 12-12 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount and 1-2 in. to 6 in. 70 per cent. discount.

Solder—We quote 18c for bar and 18 1-2c for wire solder.

METALS.

Local business in metals is fairly active, and there is not much change to report. Interest has centred this week on the strike of the Dominion Iron and Steel Company's employees at Sydney, and the decision of the company to close down their plant indefinitely. The iron market is quiet, buying being restricted to current requirements. The English market for Canada plates is reported very firm, but on the local market there is a disposition to go after business, even at low prices. Price changes are not numerous. Tin is easier, but no actual change has been made locally. Copper and lead are both weaker, the former being now quoted at 13 3-4 to 14c, and the latter at \$3.30 to \$3.40.

Pig Iron—There is not much activity at present in the pig iron market, as buyers are specifying only for present requirements. Reports from the United States markets have not been reassuring, and in anticipation of lower prices the foundries are placing no orders for future delivery. There is not enough actual business to establish a market, but prices are nominally as before. Much interest attaches to the unfortunate strike at Sydney. We quote:

"Disc," No. 1.....	\$17.50 delivered Montreal.
"Dom.," No. 1.....	13 50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18 00 delivered Montreal.
" No. 2.....	17 50 " "
" No. 3.....	16 50 " "
" No. 4.....	16 00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18 50 " "
Glengarnock.....	20 00 " "
Gartsherrie.....	19 25 " "
Carnbroe.....	18 50 " "
Carron No. 1.....	19 00 " "
" (pecial).....	17 50 " "
Ayresome No. 1.....	17 50 " "
" No 3.....	16 00 " "
Clarence No. 1.....	16 25 " "
" No. 3.....	16 00 " "

Bar Iron—Prices are steady, and no change is expected. Prices have been

so low for a long time that the local market is not much affected by the decline in U. S. markets. We quote: Merchants' bar, \$1.75; horse shoe iron, \$2; forged iron, \$1.95.

Merchant Steel—Business is fairly active. We quote: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.55; machinery (iron finish), \$2.45; square harrow, \$2.45.

Tool Steel—Trade is quiet. We quote: Black Diamond, 8c to 9c; Sanderson's, 8 to 9c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c.

Black Sheets—Primary markets show increasing strength. We quote: 28-gauge, \$2.35; 26-gauge, \$2.30; 22 to 24-gauge, \$2.25; 19 to 20-gauge, \$2.20; 8 to 10-gauge, \$2.35.

Galvanized Iron—There is an active business this week in galvanized iron. We quote: 28-gauge, Queen's Head, \$4.30; Gorbals "Best Best," \$4.30; Apollo, 10 3-4 oz., \$4.30; Fleur-de-Lis, \$4; Comet, \$4; Bell brand, \$4. In less than case lots 25c extra.

Canada Plates—The English market continues very firm, but locally there is a disposition to go after business, even if there is not much money in it. Hence there has been no advance in sympathy with the strong primary market. We quote again as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Sheet Zinc—The market is steady at the advance noted in last issue. Cask lots are selling at about \$6.50, and smaller lots at \$6.75 to \$7. Supplies are still short.

Zinc Spelter—Quoted at 6c.

Tinplates—Market firm. Cokes \$3.75, and charcoals \$4.

Ingot Tin—The tin market is easier this week, but there is no actual change locally. Former quotations of 31 1-2 to 32c still obtain.

Ingot Copper—The copper market is weak, and there has been a decline of 1-4c. Quoted now at 13 3-4c per lb.

Pig Lead—The lead market is weak, and local prices show a decline. Quotations now are \$3.30 to \$3.40.

Antimony—Cookson's is quoted at 7 3-4c.

Coil Chain—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4-in., \$6.10; 5-16-in., \$4.70; 3-8-in., \$4; 7-16-in., \$3.80; 1-2-in., \$3.70; 9-16-in., \$3.55; 5-8-in., \$3.35; 3-4-in., \$3.30; 7-8-in., \$3.25; and 1-in., \$3.20 with 10c allowance on carlots.

Scrap Metals and Old Materials—There has been a general decline in scrap metals. New quotations are as follows: Heavy copper and wire, 10 1-2c to 11c per lb.; light copper, 9 1-2 to 10c; heavy red brass, 9 1-2 to 10c per lb.; heavy yellow brass, 8c; light brass, 5c; lead, 2 3-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$14 to

\$15; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 5 to 5 1-4c per lb.

HIDES.

A steady demand has been noticed in the hide market lately, and some fluctuations have taken place.

No. 1 beef hides.....	0 08 0 08 1/2
No. 2 ".....	0 07 0 07 1/2
No. 3 ".....	0 06 0 06 1/2
Lambskins.....	0 75
No. 1 calfskins.....	0 11

ONTARIO MARKETS.

Office of HARDWARE AND METAL.

10 Front Street, East.

Toronto, June 4, 1904.

STEADINESS is the dominant quality of the hardware market situation at the present. A good sorting business in seasonable lines, particularly screen doors and windows, harvest tools, fencing wire, wire and cut nails, screws, bolts, nuts, building paper, metal lath and sheets, as well as other materials and supplies for building, is reported. In some places building operations are particularly active, while business with farmers is about as brisk as last year. A good feature of the trade is the increase in the size of orders coming to hand from Northern Ontario, Manitoba and the West. Prices are practically unchanged throughout.

Washing Machines—Business continues good. Prices are steady at the new basis. The quotations now are: Round, reacting washer, per doz., \$56; square, reacting washer, per doz., \$59; Eclipse, \$48; Dowsell, \$36; New Century, \$72.

Oil Stove Wick—Prices are steady since the advance of about 10 per cent. last week.

Steel Track Door Hangers—An active business in this line has continued. Prices are now at the same basis, as follows: Steel track, 1 x 3-16 in., \$3.50; 1 1-4 x 3 1-16 in., \$4.50 to \$4.75.

Chain—Business of a sorting nature continues excellent. Prices are still as follows: 1-4-inch, \$5.60; 5-16 inch, \$4.45; 3-8-inch, \$3.85; 7-16-inch, \$3.70; 1-2-inch \$3.55; 9-16-inch, \$3.45; 5-8-inch, \$3.35; 3-4-inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Lawn Mowers—The demand has continued active, a good sorting trade still being reported. Prices are unchanged, as follows: Woodyatt, 10 1-2 inch wheel, \$8.50; Star, 9 inch, \$7; Daisy, 8 inch, \$5.75; Philadelphia, 7 1-2 inch, \$7; Ontario, 7 1-2 inch, \$15.80; King Edward, 12 inch, \$9.50 (14-inch cut in above). D. Maxwell & Sons, 10 1-2 inch, \$7.50 to \$10; 9 inch, \$5.50 to \$6.25; 8 inch, \$4.90 to \$5.50. Discount 50 per cent.

Screen Doors—A good trade is doing in this line. We quote as follows: Common, two or three panel, walnut, 4 inch, \$6.50; yellow and green stained, \$6.75; in natural colors oil finish, \$8.75, with 20c less for 3-inch style.

Screen Wire Cloth—Prices steady at \$1.50 per 100 square feet.

Spring Hinges—A good business is reported with prices steady as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Barb Wire—Activity continues. We quote as follows: \$2.75 per 100 lbs. f.o.b. Toronto and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—An excellent sorting trade in this line is reported, prices being firm throughout: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs extra charged.

Coiled Spring Wire—Sorting orders are still coming in freely. Prices are steady. Our quotations are as follows: No. 9, \$2.70 per 100 lbs, freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65, freight allowance to 20c.

Wire Nails—A good business is reported, with prices still steady. Quotations are: \$2.45 per keg f.o.b. Toronto, with carlots \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—There is not much activity. Prices keep steady, however, as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2, and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is less active. Prices are unchanged. We still quote discounts as follows: "C" brand, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—An active demand continues. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Business keeps active in all sizes. Prices are firm. We quote as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—An active business is reported in all lines. We still quote: Carriage bolts, common (\$1 list), 3-16 and 1-4-inch, 60 per cent.; 5-16 and 3-8-inch, 55 and 5 per cent.;

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

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WELLINGTON ST., MONTREAL

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DESERONTO, ONT.

Manufacturers of

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BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

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BRAND

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

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MIDLAND, ONT. Limited

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Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

7-16 and up, 55 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 66 2-3 and 10 per cent.

Cordage—Some orders are now coming in. The quotations on binder twine for the season of 1904 are as follows: Sisal, 10 1-4c; standard, 10 1-4c; standard Manila (550 ft.), 11 1-4c; Manila (600 ft.), 12 1-4c; pure Manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are unchanged as follows: Pure manila, 15c; British pure manila, 12 1-2c; sisal, 12c; double lath yarn, 11c; single lath yarn, 10 1-2c; double shingle yarn, 11c; single shingle yarn, 10 1-2c; sashcord 'Hercules,' 32 to 35c; 'Star,' 36 to 38c; cotton rope, 3-16-inch and up, 20 1-2 to 22c; 5 32-inch, 25 to 27c; 1-8-inch, 25 to 28c; cotton twine, 3-ply 25 to 28c; 4-ply 32 to 34c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 63-4c; white, 11 to 13c.

Firebrick—A good trade is doing, with prices steady. We quote English and Scotch firebrick at 28 to 30c.

Cement—Trade is at its full height, with prices firm, as below: Canadian Portland, \$1.90 to \$2.25; American Portland, \$2 to \$2.10 f.o.b. Toronto.

Building Material—The market is steady and prices firm. We quote: Tarred felt, \$1.85 per 100 lbs; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

PLUMBING GOODS.

Activity continues with the various supply houses. An excellent business is doing in corporation brass work, in lead pipe and in enameled ware. Trade in iron pipe is less active. Prices are nominally unchanged, but cutting is still reported in iron pipe and fittings.

Lead Pipe—Prices are unchanged. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Prices remain unchanged, while there is a good amount of trade being done. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8-inch pipe 40 and 5 per cent.

Iron Pipe Fittings—Business is not so active. Prices are firm. We quote nominally: Malleable fittings, 20 per cent.; cast iron (standard), 57 1-2 per cent.; headers, 52 1-2 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 per cent.; nipples up to 6-inch inclusive, 67 1-2 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices

Sheet Zinc Sheet Copper

and other Metals.

From Stock or for Import.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,
MONTREAL.

The only reliable Pump for you to handle is

The McDougall Standard

It stands hard usage.

Lasts interminably.

Is made of iron and steel.

Outlasts several wooden pumps.

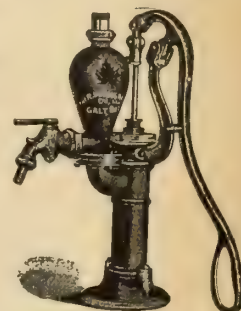
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HIGH SPEED STEEL

Crucible Cast Steel

for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

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BAINES & PECKOVER, Toronto

Agents for British Columbia:

E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

were issued. Discounts at 15 per cent. continue.

Iron Pipe—Prices are being cut by dealers, and a considerable amount of business is being done. We quote nominally f. o. b. Toronto: Black pipe, 1-8-inch, \$3.05; 1-4-inch, \$2.07; 3-8-inch, \$2.25; 1-2-inch, \$2.50; 3-4-inch, \$3.22; 1-inch, \$4.58; 1 1-4-inch, \$6.47; 1 1-2-inch, \$7.85; 2-inch, \$11.05; 2 1-2-inch, \$19.25; 3-inch, \$22.75; 3 1-2-inch, \$28.75; 4-inch, \$35.25. Galvanized pipe, 1-4-inch, \$2.88; 3-8-inch, \$3.11; 1-2-inch, \$3.42; 3-4-inch, \$4.40; 1-inch, \$6.35; 1 1-4-inch, \$8.80; 1 1-2-inch, \$10.75; 2-inch, \$14.80.

Enameled Ware—Competition is still keen and prices are still low, especially for "B" quality. We quote: "Standard" 5 1-2 feet rolled rim, first quality, at \$21.60; second quality, \$15.50 to \$16.

Copper—A fair trade is reported in ingot, also an excellent movement in sheet copper. We quote in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

Brass—There is a fair trade, with the discount steady at 15 per cent.

Lead—There is a good demand at unchanged prices. We quote \$3.25 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—Stocks are light. Buying is active at 5 3-4 to 6c per lb.

Solder—There is a fair trade. Prices are 1-2c lower. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Antimony—7 1-2 to 8c per lb.

Old Material—Business so far this year has not been quite up to the average of other years. The market is still dull, with prices unchanged. Heavy copper and wire, 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 9 1-4c per lb.; heavy yellow brass, 8 to 9c per lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.50 per cwt; scrap zinc, 3c per lb; iron, No. 1 wrought, \$10; No. 2 wrought, \$3; machinery cast scrap, \$13; stoveplate, \$10; malleable and steel, \$4; old rubbers, 5c per lb; country mixed rags, 65c per 100 lbs.

METALS.

In iron and steel a comparatively strong situation is reported. Prices of pig iron continue to decline in the United States, and several of the smelters there have shut down. Competition in Canada, however, does not seem keener, and prices are fairly well maintained. In steel a firm market has been the result of an active demand. Sheet and ingot metals are selling well at steady prices.

Pig Iron—The slump in prices in the United States continues, but offerings from that quarter in Canada are not larger. The demand in Canada is of a hand-to-mouth nature, but is of large volume. Prices are unchanged, but our quotations on Hamilton iron are 50c

THE BANNER
COLD BLAST

LANTERN

—NOTE IMPROVEMENTS FOR SEASON 1904.—

We make twelve different Styles of Lanterns in Tin, Antique Copper and Solid Brass.

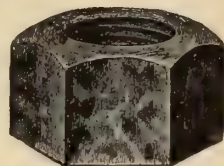
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FOR SALE BY ALL PROMINENT JOBBERS THROUGHOUT THE DOMINION.

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MONTREAL.



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs,
Etc. Cold Punched Nuts of every variety of finish.

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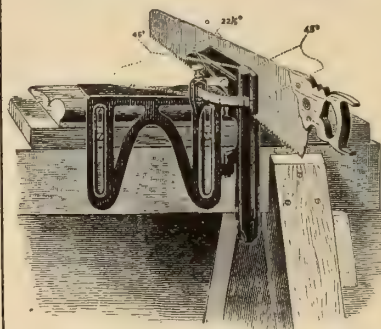
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SIMPLE—LIGHT—ACCURATE

A new idea in mitre box construction. Will cut any width or depth of moulding at any angle, with any saw.

Can be used on top of ladders, scaffold or any place a mitre box is required.

Send for the Green Book of Hardware Specialties for price and description.

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ALSO
Lead Vices,
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Agents for Canada: **A. Ramsay & Son, Montreal**

lower—a basis that has prevailed for some time.

Middleboro, f.o.b., Toronto	\$19 25
Hamilton, No. 1	\$18 25 to 18 50
" No. 2	17 75 to 18 00
" No. 1	17 00 to 17 25
Midland, No. 1	18 50 to 19 00
" No. 2	18 00 to 18 50
" No. 1 f.o.b. Midland	17 00 to 17 50
Radnor, f.o.b. furnaces	30 00
Londonderry, f.o.b. furnaces	17 50 to 18 00

Bar Iron—Prices are fairly steady, though competition for orders is keen. We quote \$1.75 f. o. b.

Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet by special agreement according to length and size.

Steel—Prices are steady, with an excellent trade doing. Quotations are as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's

“Standard” tool, 14c; “Chas. Leonard,” 8 to 9c; Jessop’s best crucible sheet steel, 14c; Crucible Steel Co.’s “Black Diamond,” 10 to 11c; “Silver,” 13c; “Special,” 17c; “Rex” high speed, 65 to 75c; “Self Hardening,” 45 to 50c.

Tin—There is still a good trade doing. As stocks are light, prices are firm at 29 1-2 to 30c.

Galvanized Sheets—There is a good demand at unchanged prices. Quotations are as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tinplates—Considerable business has been done. Stocks are light. We quote: Coke plates, bright, 14x20, \$3.10; charcoal plates, \$4.25.

Canada Plates—A fair demand is reported. A large quantity is being discharged at Montreal for delivery throughout Ontario. Prices are steady. We quote as below: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

COAL.

There is an excellent trade doing. Prices are firm throughout. We quote: Anthracite, \$5.25; bituminous for steam purposes, \$2 to \$4, according to quality, f.o.b. Buffalo and bridges.

PETROLEUM.

The petroleum market continues featureless, with trade quiet at last week's quotations, which were as follows: Canadian prime white, 18 1-2c; Canadian water white, 20c; American prime white, 19c; American water white, 21 1-2c, ex-warehouse.

Hides, Skins and Wool.

Washed wool is commencing to come in and, from all appearances, it is in good condition. The hide market is quiet but firm. The calfskin season is pretty well over, but prices continue firm. Fleece wool, new clip, has advanced 1c per lb., and lamb skins are 5c apiece higher. Unwashed wool is now bringing one price instead of two, as last week. We quote :

HIDES.

No. 1 green, per lb.....	0 08
2 " " ".....	0 07
" 1 " steers, per lb.....	0 08
2 " " ".....	0 07
Cured, per lb.....	0 08

CALFSKINS.

Veal skins, No. 1, 6 to 12 lb. inclusive	0 11
" " 2 " "	0 09
" " 1 15 to 20 lb	0 10
" " 2 " "	0 08
Deacons (dairies), each	0 65
Sheep skins	1 00 1 25
Lamb skins	0 30

WOOL.

Unwashed wool, per lb.....	0 10
Fleece wool, new clip, per lb.....	0 17
Pulled wools, super, per lb.....	0 18 0 20 ¹ / ₂
" " extra "	0 20 0 22

The name of the Dominion Steam Heating Co., Winnipeg, has been changed to the John Plaxton Co., Ltd., and the capital stock has been increased from \$24,500 to \$50,000.

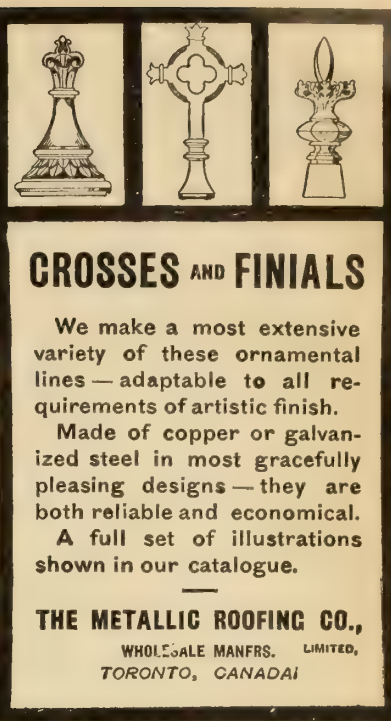
TRADE CONDITIONS IN MARITIME PROVINCES.

Special Correspondence of **HARDWARE AND METAL.**

Halifax, June 1, 1904.

THE rush of Spring trade is now over, and business has settled down to about the usual Summer conditions. The volume of business is not expected to show much change until the Fall activity begins. The fishing industry, with which the hardware trade of this province is closely allied, is in a much more flourishing condition than at this date last year. I have just had reliable information from the Nova Scotia banking fleet now about completing the Spring trip, and all the vessels that fished the northern grounds have made exceptionally good catches. At least twenty-five vessels reported have averaged 1,000 quintals each, some of them having reached as high as 1,300 quintals. The vessels that fished south did not do so well, and I hear of some with only 400 quintals, but it is now certain that on the whole the Spring trip will be above the average. Prices for spot fish, ex vessel, run from \$5.25 to \$5.50 per quintal, but of course it is too good to expect that these figures can be long maintained when the new cure comes along to take the edge off the market. The outlook for trade is therefore good in those sections of the province in which fishing is a principal industry. As an illustration of how near our people are to old Neptune, it may be said that the brother of the Premier of the province was a member of the crew of a sealing vessel which arrived here last week from a sealing voyage to the Falkland Islands. Mackerel are running off the coast, and good stops were made on Saturday and Sunday, the weather being very favorable.

The only market change of importance is in linseed oil, which since last report has been reduced three cents per imperial gallon. The present Halifax quotations are forty-seven cents for raw and fifty cents for boiled, in barrels, with extra five cents for smaller quantities. There is no change in turpentine, but there is not much confidence in the market. Paint sales have been very large this season. This is probably due to the fact that, owing to the high price of oils last year, a good deal of work was postponed until the present season. Building operations are active in this city. The military have



lately leased a large number of residences, which will likely lead to the erection of additional houses, especially in the north end.

Mr. E. L. Fenerty, the Halifax shovel manufacturer, had a narrow escape from death last week. With his wife, he was driving out the St. Margaret's Bay road, when a blast set off by the workmen on the new line of railway under construction caused a piece of rock to strike his horse, killing the animal instantly. Mr. Fenerty was thrown beneath the horse's feet, and received a number of bruises. He will enter an action for damages against the construction company.

The Dominion Chemical Co., of Sydney, have chartered a steamer to carry a cargo of pitch to Italy. The greater part of this company's output for the Summer months has been contracted for in advance.

At present writing the strained relations between the Dominion Iron & Steel Co. and its employes are serious. To-morrow at midnight is the limit set by the men for the answer to their ultimatum, demanding an increase of wages.

PITTSBURG METAL MARKET.

From The Iron Trade Review, June 2, 1904.

Lower prices for pig iron and a number of finished products have come in the past week and the iron market gives distinct evidence of the shrinking of demand into narrower channels. There are signs of preparation for a quiet Summer in the banking or blowing out of a number of blast furnaces in the Central West, the Chicago district and in Pennsylvania, though as yet the United States Steel Corporation has not participated in this movement apart from the stopping of several stacks of the Illinois Steel Co. There is no lack of ore in the yards of the Steel Corporation at South Chicago, but other furnaces in that district may have to curtail further if the lake strike lasts many weeks longer. The great majority of consumers of pig iron have no contracts beyond the middle of the year, and ordinarily a brisk buying movement would be under way. But only in exceptional cases, and these where large contracts have been undertaken by the foundries, as in the cast iron pipe trade, are buyers in the market. General business conditions have not changed for the worse. Crop prospects show improvement, according to official reports of the week, and the supply of money is abundant. But hesitancy is dominant in manufacturing operations, and the iron and metal-working trades seem to be adjusting themselves to a wait that may be prolonged over several months.

Reports from pig iron centres show that where any considerable business is inquired on new low prices come out. While \$9.25, Birmingham, for Southern No. 2 iron is commonly the price, one or two large orders have been taken at \$9. Though gray forge has been relatively scarce and for early delivery has been held firmly, \$8 has been done on a good-sized order for the third quarter, while No. 3 and No. 4 foundry sold at \$8.75 and \$8.50 respectively. A 10,000 ton contract involving considerable amounts of Nos. 3 and 4 is reported from Cincinnati, and a Northern Ohio pipe concern has inquired for 12,000 tons, of which 2,000 tons has been placed.

Chicago reports about 8,000 tons of bar iron sold at lower prices. Orders for 1,350 cars placed in that district account for most of the activity in bars. In the Pittsburgh district a bar iron contract is reported at about \$2 below the recent basis. In wrought pipe the outlook is excellent, gauged by the demand due to pipe line work, a 20,000 ton contract for Kansas being the latest development. It is understood that the year's programme of the leading buyer will call for far more than the 100,000 tons originally contemplated. In merchant pipe close competition continues, and a reduction of a point has been made in the past week. Wire and wire nails have a weakening tendency, and the announcement of lower prices is looked

for. Sheets are making new records, and as low as 2.10c at mill for No. 28 was touched on an important contract in the past week.

Pir Iron—Northern No. 2 is being freely offered at \$13 Pittsburgh, and on a desirable order \$12.85 can be readily done. Gray forge is quoted at \$12.75, but this can be shaded 25c a ton. One local concern last week purchased 1,700 tons of foundry and forge iron for delivery outside of this district. The iron is for delivery during June and July, the No. 2 foundry being placed close to \$9 Birmingham, while the forge went at a trifle below \$8.25 at the southern furnace. For June delivery, southern furnaces are now freely quoting \$9.25 Birmingham, and \$9 could be done on a desirable tonnage. Owing to the heavy demand for forge iron on the part of the cast iron pipe interests, this grade is stronger than the foundry irons, and while it might be possible to do \$8 Birmingham, the prevailing quotation is \$8.25. There is no demand for steel-making irons, and quotations continue merely nominal at \$12 to \$12.15 Valley furnace. During the present month pig iron production in the Valleys will be curtailed from 35 to 40 per cent., although no formal action to curtail output has been taken, nor will any be taken. We revise quotations as follows:

Bessemer, Valley	\$12 15 to	\$12 25
Bessemer, Pittsburgh.....	13 00 to	13 10
No. 1 Foundry.....	13 25 to	13 50
No. 2 Foundry	12 85 to	13 00
Gray forge, Pittsburgh	12 50 to	12 75
Chilled basic, Valley	12 00 to	12 15
Chilled basic, Pittsburgh.....	12 85 to	13 00

Bars—An order for 1,000 tons of iron bars, placed this week, was closed at close to 1.30c Pittsburgh, for assorted sizes. This price netted the mill about 1.20c on common bars taking no extras. Current demand for both iron and steel bars continues light, while specifications on existing contracts are by no means heavy. We quote: Bar iron, 1.30c to 1.35c Pittsburgh, for local delivery, while for western shipment quotations are based on 1.25c to 1.30c Pittsburgh.

Structural Material—The Pennsylvania Railroad Co. is asking for bids on the structural work on its Duquesne Way elevated track. The construction of this elevated road will require 5,000 tons of steel. Bids will be opened on June 13. The Wabash has not yet closed for its South Side elevated tracks, requiring about 5,000 tons. We quote as follows: Beams and channels, 3 to 15 inches, 1.60c; 18 to 24 inches, 1.70c; tees, 1.65c; zeels, 1.60c; angles, from 3 to 16 inches, 1.60c; universal mill plates, 1.60c.

Pipes and Tubes—The Union Natural Gas Corporation, of this city, will shortly close for about 20,000 tons of line pipe for a gas line to extend from Independence, Kan., to Joplin and Kansas City. The demand for line pipe for gas and oil lines is heavier this year than

ever before in the history of the pipe trade. On steel merchant pipe competition is keen and prices on all sizes, except 7 to 12 inches, have been reduced one point.

Wire and Wire Nails—A new list on wire and wire nails is now looked for by the trade, carrying a reduction of \$1 a ton. Concessions on delivered prices from 40 to 60c a ton are being made. We make the following quotations: Wire nails, carload lots to jobbers, f. o. b. cars Pittsburgh, are quoted \$1.90 base; plain wire, carload lots, \$1.80 base; barb wire, carload lots, \$2.20 base; staples, carload lots, \$2.05 keg. Galvanized, 30c extra. Carload lots to retailers are held at 5c advance in all lines, and on less than carload lots a further advance of 10c is charged. Steel and iron cut nails, carload lots, \$1.75, and less than carload lots, \$1.80 f. o. b. Pittsburgh, plus freight to points of destination. Terms, 60 days, less 2 per cent. off in 10 days.

Coke—The shipment of trainloads of coke to Chicago and Buffalo on consignment has resulted in heavy losses to the coke producers, and as a result a large number of ovens are being shut down. At Chicago consignment coke has sold as low as 40c a ton during the week and numerous sales were made at 65 and 80c, the buyer of course paying the freight and demurrage charges. On contracts and current business \$1.45 to \$1.60 is quoted on furnace coke and \$1.85 to \$2 on foundry. For the week ending Saturday, May 21, the production of the upper region amounted to 210,795 tons and that of the lower Connellsville region, 55,078 tons.

Sacrifice sales of coke shipped on consignment have established record low prices in the week and curtailment in the coke regions seems inevitable.

LONDON METAL MARKET.

From The Metal Market Report June 3.

Pig Iron—Scotch warrants, Glasgow, closed at 51s 6d, a decline of 3d. Midlandsboro No. 3 foundry at 43s 4 1-2d, a decline of 3d.

Tin—Spot tin opened steady at £122 7s 6d, futures £122, and after sales of 250 tons of spot and 150 tons of futures closed easy at £122 2s 6d for spot and £121 15s for futures, making prices as compared with last week £2 lower on spot and £1 9s for futures.

Copper—Spot copper opened easy at £56 7s 6d, futures £57 7s 6d, and after sales of 25 tons of spot and 50 tons of futures, closed easy at £56 12s 6d for spot and £56 12s 6d for futures, making price as compared with last week 5s higher on spot and 2s 6d higher on futures.

Lead—The market closed at £11 18s 9d, making price as compared with a week ago 5s lower.

Spelter—The market closed at £22, making price as compared with last week unchanged.

BUSINESS CONDITIONS IN BRITISH COLUMBIA.

Special Correspondence of Hardware and Metal.

Vancouver, B. C., May 28, 1904.

THROUGH dispatches from the east this week, the public have had their interest engaged once more by the Grand Trunk Pacific Railway. The point of interest is that the statement is positively made, that the railway will begin construction simultaneously from the Pacific and from the east. This is not yet an official announcement, but would seem to be an assurance privately from members to their supporters here. Aside from the general proposition of a second transcontinental line making a terminus on the tidewater in this province, the chief point is just this commencement of construction. Were the work not to begin from this end at the same time as from the east, there would be less friendly interest in the undertaking, if there would not develop active opposition. The advantages accruing from such construction have been pointed out frequently, and in fact they are very obvious.

* * *

The lumber duty, or the movement to secure the imposition of a duty on lumber, has been somewhat less prominent in the eye of the business public this week. After the decision to have representations made by delegates sent to Ottawa from the leading cities for the purpose, the boards of trade have been making arrangements to have some of their members, now in the east, arrange to attend at Ottawa and press the matter. So far no definite news of any interview with the Government has been received, but all efforts to have some strong representations, personally made, are being put forth.

* * *

Northern trade is picking up materially. The shipments by outgoing steamers have increased so that the cargo space is beginning to be taxed fully. The City of Seattle, on its way to Skagway, had all she could take from here last night, and so valuable is space now that if shippers engage so many tons space it is charged to them whether they use it or not. The C. P. R. steamer Amur, which also sailed last evening, had a full cargo from this port. Local wholesale merchants have the whole of it to their credit. Another large northern shipment, for Dawson via St. Michaels and the Lower Yukon, went out on the steamer Olympia, which sailed on Thursday morning. She carried over 800 tons from here, and over 95 per cent. of the goods were Canadian produce or Canadian manufacture. As an indication of the position in the trade of the Yukon, this is a pretty strong proof that the American invasion, which was such a prominent feature in the past, has become a thing of the past. It is worth noting by Canadian tool manufacturers that the shipments sent by the Dawson Hardware Co. were practically the only goods not of Canadian manufacture which were shipped by this steamer. The reason for that has been stated in this column once before. The representatives of Dawson merchants assert that there is a demand for U. S. made

shovels and mining tools because they are better adapted to the trade, partly on account of the percentage of Americans who are operating in the Yukon, and partly owing to the fact that the U. S. manufacturers seem to understand the requirements of mining tools better. There is, of course, to be considered that Canadian manufacturers do not always find themselves in a position to accept orders, as they have enough on hand to keep them going. It is worth while, however, to see that there is business which is going out of the country, and which is, of course, worth looking after.

* * *

The Pacific Coast S. S. Co.'s steamer Umatilla took out from this port for San Francisco this week five cars of lead bullion from Kootenay smelters for the Selby Refining Works. This bullion is beginning to go as freely as before refining was commenced at Trail. For a time there was a practical cessation, and recently the shipments have begun again. It is to be noted in this connection that the lead mine owners are asking for the extension of the lead bounty to ores and concentrates shipped out of the country for refining, owing to the fact that it cannot all be treated by present establishments.

* * *

The Canadian Pacific Railway announces a restriction of its common-point rates on through freight shipments from the east. The rule will in future be that for the Kootenays, Rossland and Nelson will be the only common points. To other points in the interior served from those two cities, there will be charged the local rate plus the common-point rate. This practically gives Rossland and Nelson distributing centre advantages, and will have a tendency to increase the amount of jobbing done from those two cities. For freights from the east direct to customers it will be necessary to figure in future on the added local rate. Just what position it will place Revelstoke in as a distributing point from the main line of the C. P. R. south into the Kootenays, does not appear from the circular. Not long ago Revelstoke made a strong representation to Mr. F. W. Peters, general freight agent, for recognition as a distributing point, but no action is yet announced.

* * *

In connection with the extension of the sewer system of the City of Vancouver, for which a special appropriation of \$150,000 has been voted, there will be built seven new septic tanks to serve the trunk sewers in various parts of the city. There are now six septic tanks in operation in the city, and some of them have been several years in successful use. The system has been demonstrated a practical success here, and has attracted wide attention not only from cities and towns in the Northwest and Manitoba, where the disposal of sewage is a serious problem as centres of population expand, but from many cities in the United States. Numerous visitors from all over the continent have from time to time inspected the working of the system, and all have given their unqualified approval of the method. It is to be noted in this con-

nection, that the situation of the City of Vancouver permits of easy access to salt water for the disposal of the effluent, which practically harmless as it is would have, in other places inland, to be run on to large areas of land prepared as absorption beds, as the law prevents the deposit of sewage matter or any effluent from a sewer into a running stream from which water is taken.

* * *

The announcement is made that the Great Northern Railway is to extend its branch from Jennings, Montana, to Fernie, in the Crow's Nest Coal District. Surveyors are at work laying out the line and outfits for active construction are being assembled on the ground. The rumored extension of the present branch of the Great Northern line from the Boundary Country to the coast via the Fraser Valley, after crossing the Hope Mountains, is also currently discussed.

* * *

The big China Mutual steamer Hyson is in port discharging the very large quantity of Old Country merchandise of 1,800 tons, the largest single arrival since the steamers of this line began to make this a regular port of call. The bulk of the imports, which are for local merchants, are hardware, iron, steel, chain, galvanized iron sheets, pig iron, fire brick and some cement.

* * *

In the City of Vancouver the greatest activity in building now prevails, the season being one of the busiest in the history of Vancouver's "growing time" of the past five years or more.

* * *

In Victoria business men report somewhat a reverse of the conditions which prevail in Vancouver. In the capital the retail trade is enjoying fairly prosperous business, while the jobbing trade is quieter than usual at this season of the year.

* * *

In the interior, traveling men who have been making the trip say that everywhere there is activity and expansion of the work of development. In addition to mining being very carefully and substantially pushed in many quarters, the lumbering industry has experienced a great increase. The trade with Alberta is also very satisfactory. Up the coast the logging industry and the preparations for the salmon packing season are causing a very good volume of trade to flow to the cities of the coast. Every coasting steamer engaged in northern B. C. trade is doing all the business, both freight and passenger, that it can handle.

HARDWARE BASEBALL CHALLENGE.

The baseball team recently organized among the employes of Caverhill, Learmont & Co., is practising hard these days, so as to be ready to meet all comers. They are coming out soon in grey sweaters tipped with maroon, and having a handsomely worked monogram of the same color.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

BUSINESS CHANCES.

A GOOD HARDWARE STORE and tinware business, with tinshop, in a progressive town, about 1,000 population; stock between \$4,000 and \$5,000; good reason for selling. Address, Box 136, **HARDWARE AND METAL.** (24)

HARDWARE BUSINESS—About \$4,000, in largest mining town in New Ontario. For particulars address **Horne & Hardy, Copper Cliff.** (24)

SITUATIONS VACANT.

BRASS FINISHER—Familiar with switchboard and other electrical work. Apply to Canadian General Electric Co., Peterboro', Ont. f

BOILERMAKERS—A number of good men wanted. Apply stating wages, to The Goldie & McCulloch Co., Galt. f

CURRIERS wanted; two good setters on harness; piece or day work. Apply John Welsh & Co., Hastings, Ont. f

EXPERIENCED tanners and cornice-makers; good wages and steady employment. Robert Hutton & Co., 112 East Fort St., Detroit, Mich. f

FIRST-CLASS plumber and tinsmith; steady job; state wages, experience and references, if any, to Box B, Parry Sound. f

MACHINIST—At once; one who is good on general repair work. W. G. Paton, Wingham, Ont. f

MACHINIST—Planer hand; on engine and heavy machinery; permanent situation for good, steady, sober man; state experience and wages. M. Beatty & Sons, Welland, Ont. f

PAINTERS—Two brush hands; highest wages. Thos. Evans, Paris. f

PAINTER—Wanted at once; good brush hand; steady work. L. Traver, Midland, Ont. f

TINSMITH—At once; state experience and salary. Box 136 Durham, Ont. f

TINSMITH—Good all-round hand. W. H. Turnbull & Son, 99 Colborne street, Brantford. f

THREE good tinsmiths; for general work; must be experienced men; highest wages paid. Adam Hall, Peterborough, Ont. f

TWO or three moulders; for light work; one stove-plate man; union shop. G. Walter Green, Peterboro'. f

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL

Room 308 McIntyre Block,

Winnipeg, May 30, 1904.

BUSINESS in the city continues to move along brightly, and the prospects are good. Trade through the country shows much improvement over the previous months, and the appearance of business generally is encouraging.

The market practically holds the price list the same as was quoted in last week's report. We quote:

Barbed wire, 100 lb.	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91

Annealed wires (uncoiled) roc. less.

Horsenails, 40 per cent. discount.

Horseshoes, iron, No. 0 to No 1..... \$4 75

No. 2 and larger	4 45
Snow shoes, No. 0 to No. 1	4 60
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 45
No. 2 and larger.....	4 20

Cut Nails—	Wire Nails—
2d 1 in.....\$4 10	1 in.....4 15
3d Fin. 1½ in.. 4 10	1½ in.....4 10
3d 1½ in.....3 75	1½ ".....3 70
4d 1½ in.....3 50	1½ ".....3 50
5d 1½ in.....3 50	1½ ".....3 50
6d 2 in.....3 40	2 ".....3 40
8d 2½ in.....3 25	2½ ".....3 25
10d 3 in.....3 20	3 ".....3 20
20d 4 in.....3 15	3½ ".....3 15
30d 4½ in.....3 10	4 ".....3 10
40d 5 in.....3 10	4½ ".....3 10
50d 5½ in.....3 10	5 ".....3 10
60d 6 in.....3 10	5½ ".....3 10
	6 ".....3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100lb.....	8 50
Jessop.....	13 00

Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10

Galvanized Iron, Apollo, 16 gauge	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American ..	4 25
28 gauge.....	4 50
30 gauge or 10½ oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28 ".....	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	

Genuine Russian, per lb.....	11
Imitation.....	07 to 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 50

Tinplate, IC charcoal, 20 x 28, box	9 50
" IX.....	11 50
" IXX.....	13 50
Ingot tin.....	35

Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 15
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50

Pig lead, 100 lb.....	5 50
Black iron pipe, ¾ inch.....	3 30
" ¾ ".....	3 30
" ¾ ".....	3 40
" ¾ ".....	3 75

Black iron pipe, ¾ inch.....	4 30
" 1 ".....	6 25
" 1½ ".....	8 75
" 1½ ".....	10 50
" 2 ".....	14 50

Rope, sisal, 7-16 and larger, basis.....	11 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrum.....	11 25
Solder.....	20

Axes, chopping.....	\$ 6 75 to 12 00
" double bits.....	12 00 to 18 00
Bluestone.....	5 25

Screws, flat head, iron, bright.....	.85 and 10 p.c.
Round ".....	80 p.c.
Flat " brass.....	.75 and 10 p.c.
Round ".....	.70 and 10 p.c.
Coach.....	70 p.c.

Bolts, carriage, 3-16 and ¾.....	60 p.c.
" 5-16 and ¾.....	55 and 5 p.c.
" 7-16 and up.....	55 p.c.

Bolts, machine, ¾ and under.....	50 and 5 p.c.
" 7-16 and over.....	55 and 5 p.c.

Bolts, tire.....	.60 and 5 p.c.
Bolt ends.....	.55 and 5 p.c.

Sleigh shoe bolts.....	70 p.c.
Machine screws.....	70 p.c.

Plough bolts.....	.55 and 5 p.c.
Square nuts, case lots.....	.3c. discount.

" " small lots.....	.2½c.
Hex.....	.3c.
" " case lots.....	.3c.
" " smaller lots.....	.2½c.

Rivets, iron.....	.50 and 10 p.c.
Copper, No. 8.....	32
No. 12.....	36

Coil chain, 3-16 inch.....	9½
" ¾ inch.....	7½
" 5-16 inch.....	5½
" ¾ inch.....	5½
" 7-16 inch.....	4½
" ¾ inch.....	4½
" ¾ and ¾ inch.....	4

Spades and shovels.....	.40 and 5 p.c.
Harvest tools.....	60 p.c.

Axe handles, turned, s.g. hickory, doz..	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60

Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.

Building paper:	
Anchor, plain.....	65c.
" tarred.....	70c.
Pure fibre, plain.....	67½c.
" tarred.....	80c.

Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
American R.F.....	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.

Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00

Shot, Ordinary, per 100 lb.....	6 00
Chilled.....	6 50
Powder, F.F., keg.....	4 75
F.F.G.....	5 00

Tinware, pressed, retinned.....	70 and 10 p.c.
" " plain.....	75 and 2½ p.c.
" pieced.....	
Japanned ware.....	37½ p.c.

Enamelled ware, white.....	45 p.c.
" Famous.....	50 and 10 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American	27 1/4 c.
Prime white American	25 1/4 c.
Water white Canadian	25 1/4 c.
Prime white Canadian	24 1/4 c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap	5
Copper (heavy)	8 1/2 c. per lb.
Yellow brass (heavy)	7 1/4 c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead	2c. to 2 1/4 c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead	\$6 00 to \$6 50
Putty in bladder, 2 1/2 lb., in keg of 100 lbs.	0 02 1/2
Turpentine, pure, in barrels	\$ 0 97
Less than barrel lots	1 02
Linseed oil, raw	0 52
Boiled	0 55

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine	0 29
" " extra engine	0 27
" " dynamo	0 35
" " black	0 22
" " cylinder	\$0 50 to 0 75
(as to quality)	

Harness oil	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00 1/2
" " 2nd pressure	1 09 1/2

IRON AND STEEL STRIKE.

The eighteen hundred employes of the Dominion Iron & Steel Co. have gone on strike, and the works are practically tied up. It is said that the strike may involve the Dominion Coal Co., and if the employes of this firm went out it would be more serious than in the case of the Iron & Steel Co. It is thought that the closing down of the works is not so serious for the company as it would have been had more favorable conditions existed in the iron trade. As conditions are at present the directors do not see their way clear to raise the wage scale, as demanded.

C. H. Westwood & Co., whose building was destroyed in the recent Toronto fire, have made all arrangements for rebuilding on the site of their old premises, at 72 Bay street.

STRUCTURAL STEEL WORK.

The Hamilton Bridge Works have under way several good contracts. They are installing a steel roof on the Berlin Gas Works; erecting steel buildings for the Canadian Westinghouse Co.; putting up steel structures for the Belleville Cement Works at Point Anne, near Belleville; building a power house for the Canadian Niagara Power Co. The firm also have nine highway bridges, with reinforced concrete floors.

"Matchless Treasure" RANGE



4-Hole Coal or Wood Range

Sheet Steel Oven, Duplex Grate,
Nickel Steel Edges, "Never-Break"
Steel Base.

A splendid baker, moderate in
price, and economical on the fuel.

EVERY "MATCHLESS TREASURE" GUARANTEED.

THE D. MOORE COMPANY, HAMILTON

MANITOBA DEPOT

MERRICK, ANDERSON & CO.,

117 Bannatyne St. East, - Winnipeg

Stephens'

BARN & ROOF PAINT.

MADE WITH
MANITOBA
PURE LINSEED
OIL

The Greatest Seller in the Paint Line

Write us for new prices.

MANUFACTURED BY
G. F. STEPHENS & CO., LIMITED
170, 172, 174, 176 Market Street, - WINNIPEG, CANADA.

PAINT, OIL AND BRUSH TRADES

Dead Surface Varnish Media.

IN certain kinds of decorative work there is a constant demand for a medium with which to mix pigments, which will enable the latter to dry with a dead non-lustrous surface, says the Review. Such media are usually obtained by dissolving paraffin wax or beeswax in a suitable solvent. The three media most in use at the present time are Parry's medium, which consists of gum elemi in turps and oil of spike in which is dissolved a small quantity of white wax. To the mixture so formed copal oil varnish is added until the requisite binding consistency is obtained. Church recommends 4 ounces of paraffin wax in 12 fluid ounces of turpentine. The mixture is heated until dissolved, and to it is added 16 fluid ounces of oil copal varnish, the whole being then warmed and shaken together. Lourie suggests the use of beeswax in place of paraffin wax in the above. Diluting media in such mixtures are

turpentine, oil of spike and certain petroleum fractions.

Benzine Tests.

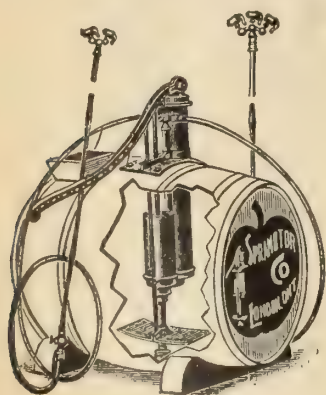
Benzine is often adulterated with petroleum oil, in which case it gives off a disagreeable and persistent odor. A method of recognizing the fraud consists in placing a small piece of pitch in the suspected benzine, which, when the benzine is adulterated, will soon be dissolved, but will color the liquid less on account of the presence of the petroleum oil, says Oil and Colourman's Journal. To judge with certainty, it is well to examine the benzine by comparison with a type of standard purity (benzol). Benzine can be distinguished from benzol in the following way: Benzine is colored violet by a crystal of potassium iodide, while benzol is colored carmine. If to two cubic centimetres of benzine three or four drops of a clear ether solution of sandarach (1-10) are added, a persistent cloudiness is produced in the

benzine, while with benzol, treated in the same way, the cloudiness will soon pass away. Finally, if the benzol is shaken with a drop of alcohol, it will become clouded, while the benzine will remain clear.

A New Use for Glue.

An application for burns can be made, it is said, by taking fifteen ounces of the best glue, breaking it into small pieces and adding two pints of water. This having become soft, should be dissolved by means of a water bath; two ounces of glycerine and six drachms of carbolic acid should be added, and the heat continued until the whole is thoroughly dissolved. On cooling this mixture hardens to an elastic mass, covered with a shining parchment-like skin, and may be kept for any length of time. When required for use it is placed for a few minutes in a water bath until sufficiently liquid, and applied by means of a brush. In about two minutes it forms a shining, smooth, flexible and nearly transparent skin.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.



THE SPRAMOTOR

is recognized by the users as the most durable and efficient apparatus yet invented, for the

Prevention of blight and bugs on fruit and potatoes.

For the destruction of wild mustard in the grain crops without injury to the grain, and for

The painting of buildings.

Has been awarded First Place by the Canadian Government in actual contest, and

The Gold Medal at the Pan-American.

The Trade fully protected.

Write for particulars and discounts. Terms liberal.

THE SPRAMOTOR CO.,

68-70 King St., LONDON, CAN.



You can get Paint at almost any price. This does not apply to Hollywood, as it is fixed in price as it is in quality.



Being designed to give entire satisfaction to the most critical customer, it is as low in price as it is possible to get a thoroughly reliable article.

Hollywood Paste, Ready-Mixed and Floor Paints

They wear on the job, not off it.

The Imperial Varnish & Color Co.

LIMITED,

TORONTO, ONTARIO, CANADA.

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention **HARDWARE AND METAL** when writing.



GILLETT'S LYE

—IS GOOD FOR—

Engineers

As a Boiler Cleaner and Anti-Incrustator.

DID YOU KNOW THIS ?

Sell Gillett's Lye

—TO

Engineers.

E. W. GILLETT COMPANY LIMITED
TORONTO



REGISTERED TRADE MARK

Gilt Edge
650 FT.

Gold Leaf
600 FT.

Silver Leaf
550 FT.

Maple Leaf
500 FT.



The Best

FOUR MAPLE LEAF BRANDS
HIGH-GRADE BINDER TWINE

Best in Quality.

Product of Canadian Industry.

Growing in Popularity.

BEST—For the Dealer to buy to sell
BECAUSE

BEST—For the Farmer to buy to use.

ENQUIRIES RECEIVE PROMPT ATTENTION.

The Brantford Cordage Co., LIMITED Brantford, Ont.

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, June 3, 1904.

THE flurry in paris green, which has been a feature of the market for the last two or three weeks, seems to be subsiding. It has been suggested that the potato bugs have struck against the "open" bucket, and have refused to come to the surface to be annihilated. Whatever the cause, business in paris green is very quiet. One well-known jobber remarked to Hardware and Metal this week, that this has been the poorest year for paris green sales that he has ever experienced. The real explanation is that the severe Winter and late opening of Spring have made everything backward.

General business is brisk, and values throughout are fairly well maintained. Dry colors and colors ground in oil and in japan are in active request, and a good movement is noted in varnishes and japans. Turpentine and linseed oil are unchanged in price, but, as stated last week, neither item is particularly strong. General supplies of paints and oils seem fairly ample, and there is no complaint of delays, as in former seasons. Some houses have been working overtime in order to keep up with their orders, as retailers have been asking for immediate delivery. We quote:

Ground White Lead—Best brands, Government standard, \$4.50; No. 1 \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100-lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100-lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25-lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

Putty—Bulk, in barrels, \$1.40; in 25-lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

Orange Mineral—Casks, 7c; 100-lb kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4; in 100-lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 85c per gallon; 2 to 4 barrels, 84c per gallon. Smaller quantities than barrels, 90c per gallon. Standard gallon of 8.6 lbs.

Linseed Oil—Raw, 1 to 4 barrels, 43c; 5 to 9 barrels, 42c; boiled, 1 to 4 barrels, 46c; 5 to 9 barrels, 45c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in wholesale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels, 141-4c; arsenic kegs, 141-2c; 50 and 100 lb drums, 15c; 25-lb drums, 15 1-4c; 1-lb packages, 16c; 1-2-lb packages, 18c; 1-lb tins, 17c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 141-4c; arsenic kegs, 141-2c; 50 and 100 lb drums, 15c per lb; 25 lb drums, 15 1-2c; 1-lb paper boxes, 16c; 1-lb tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, June 4, 1904

REDUCTIONS in both linseed oil and turpentine are reported this week, the decline being 2c in each case. A good business has been done this week. Early in the week orders were small, but came in from all quarters. The disagreeable weather has probably stopped much painting, but retailers seem to be using their time to look over their stocks, and a good business has in consequence continued. With the exception of turpentine and linseed oil, materials are unchanged in price.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb and upwards; 1-2c per lb extra will be charged for 121-2-lb packages; genuine dry white lead, in casks, \$4.50.

Red Lead—Genuine in casks of 560 lb, \$4.25; ditto, in kegs of 100 lb, \$4.50; No. 1, in casks of 560 lb, \$3.75 to \$4; ditto, in kegs of 100 lb, \$4.25.

White Zinc—Genuine, French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5-gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100-lb; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon; No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls. 41c; boiled, 44c; 5 to 9 bbls, raw, 40c; boiled, 43c. Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points. Another quotation is: Raw, 1 to 4 bbls, 43c; boiled, 46c; 5 to 9 bbls, 42c; boiled, 45c; 10



Send us a post card
and let us tell you
all about them.

TRADE WINNERS.

That's what you'll find

ANCHOR and ENGLISH LIQUID PAINTS

They not only win trade, but they hold it.

They are the only ready-mixed paints made in Canada that contain **Brandram's B. B. Genuine White Lead**—standard of the world.

HENDERSON & POTTS, Limited, Halifax.

HENDERSON & POTTS CO., Limited, Montreal.

DON'T GO GROPING AROUND IN THE DARK



BUT BRIGHTEN
UP YOUR
STORE
AND
FACTORY
BY USING

**LUXFER
SIDEWALK
PRISMS**

AND

**LUXFER
WINDOW
PRISMS**

LUXFER PRISM CO.,
100 King St. W., TORONTO. LIMITED

The Auer Gas Lamp.

"TURNS NIGHT-TIME
INTO DAY-TIME."

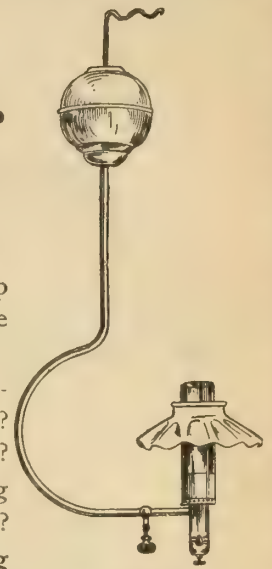
New Styles. Lower Prices.

Are you interested in a lamp
which gives 100 candle
power?

Are you interested in light-
ing your store brilliantly?
You know it draws trade?

Are you interested in saving
half of your bill for coal oil?

Are you interested in having
the agency for a lamp
which does this?



No. 28
100 Candle Power.

Then write for our Catalogue and Discounts.

EVERY LAMP GUARANTEED.

AUER LIGHT CO., 1682 NOTRE DAME ST., MONTREAL.

A Weatherable Paint for Out-of-Doors
A Washable Paint for In-Doors

STERLING PAINTS

To be recommended wherever a new surface is required
on the face of things.

CANADIAN OIL COMPANY, Limited
Scott and Front Sts., **TORONTO.**

RETURNED
JUN - 8 1904
Book 20
24
M.M.

THE "SUN" VARNISH

will make

A SUNNY HOME!

It may not generally be known
that the

CANADA PAINT COMPANY LIMITED

have one of the largest and most complete varnish plants in the Dominion of Canada. Their varnish premises in Toronto have an area of **two acres**. If you are desirous of extending your varnish trade address

The CANADA PAINT COMPANY, Limited

Montreal or Toronto.



barrels and over open, ex-Toronto, 2 per cent. off 30 days.

Turpentine—Single bbls, 81c; 2 to 4 bbls, 80c; 5 bbls and over, f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls, 84 1-2c; 2 to 4 bbls, 83 1-2c; 5 bbls, and over, open ex-Toronto with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5-gallon packages, 50c and 10-gallon packages 80c will be charged.

Glues—Broken sheet, in 200-lb bbls, 8 to 8 1-2c per lb; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100-lb kegs, \$1.85; bulk in barrels, \$1.45; bulk, less than barrels and up to 100-lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per bbl.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per pound, and 8 1-2 to 9c for single tins.

English Paris Green—Petroleum bbls, 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100-lb drums, 14c; 1-lb packages, 15c; 1-lb tins, 16c; 1-2-lb tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls, 13 3-4c; arsenic kegs, 14c; 50 and 100-lb drums, 14 1-2c; 1-2-lb tins, 18 1-2c.

St. John, N.B.

The price in Nova Scotia is usually a little lower than in New Brunswick, owing to the low water freights from Boston, which makes increased competition. Some few weeks ago prices there were reduced 1c, and last week, in sympathy with this, the local quotation was marked down 1c. Dealers claim, however, that the only reason for this is the keen competition, and that otherwise the market is a very firm one. There continues to be a steady demand. The busiest season in lubricating oil is over, as far as booking orders is concerned. Prices are held firm, while shipments are being freely made.

Linseeds continue low, with rather less sale. Turpentine, which has been quoted very high for some time, is rather lower. In fish oils, while the season is yet early, a rather easy market is anticipated.

Window Glass.

MONTREAL.

There is an active trade in glass. We quote: First break, 50 feet, \$1.70; second break, \$1.80 for 50 feet. First break, 100 feet, \$3.25; second break, \$3.45; third break, \$3.95; fourth break, \$4.20.

TORONTO.

A good trade in window glass and a fairly good business in plate and ornamental glass is reported. We quote

nominally as follows: Star, first break at \$3.30 per 100 feet and Double Diamond, first break, at \$5.10. Discount, 15 and 20 per cent.

Trade Enquiries

Government Enquiries.

The names of the firms making these enquiries, together with their addresses, may be obtained from the Department of Trade and Commerce, Ottawa, by quoting office under which the enquiry appears and giving number.

CANADIAN HIGH COMMISSIONER, LONDON.

76. A gentleman with experience of the London market and of the South African trade, desires to obtain the representation of a few Canadian manufacturers, more especially in bank, church and office furniture, joinery and bent wood.

77. A Canadian gentleman resident in London is looking out for agencies on commission or otherwise for Canadian exporters.

CURATOR, CANADIAN SEC. IMPERIAL INSTITUTE.

45. A tanning company in the North of England invites correspondence from Canadian shippers of hides.

46. Inquiry is made for the names of Canadian manufacturers who are in a position to supply materials for office-top desks which would subsequently be fitted up on this side.

47. A firm of heating engineers is prepared to hear from Canadian manufacturers of heating appliances suitable for this market.

PERSONAL MENTION.

Mr. Harry Walker, late of Fort Dodge, Ia., is now manager of Robt. Horne's hardware business at Copper Cliff, Ont.

Mr. C. F. Cragg, of Cragg Bros. & Co., Halifax, N. S., has returned from a six weeks' business trip as far west as Winnipeg.

Mr. H. Valliers, who was formerly with the Canada Hardware Co., and lately managing a retail hardware store in Quebec, has taken a position as city traveler with Lewis Bros.

Mr. W. A. Wood, of Caverhill, Learmont & Co., is taking a holiday this week, the occasion being his marriage to an estimable young lady in the west. He was presented with a handsome cutlery cabinet by his fellow employees before he left.

Mr. George J. Rogers, of Charlottetown, P. E. I., was a caller at the Montreal office of Hardware and Metal on Tuesday. Mr. Rogers is connected with the Rogers Hardware Co., (formerly Dodd & Rogers), a firm well known to the Maritime Province readers of this paper. He was forced to give up active work some time ago, but after a long holiday he is returning to Charlottetown with a renewed energy which should make business hum. Mr. Rogers speaks very highly of Hardware and Metal, which he has read for several years.

R. E. THORNE, 768 Craig St.,
MONTREAL
Wholesale Agent and Importer
Dry Colors, Ochres, Bronze Powders,
Aluminum Powder, Schlag Metal,
Bronze Liquids and Varnishes.
Toronto Office—29 Melinda St.



The Quickest
Selling Metal Polish

is the usual remark of the trade
when you ask them about

SOLARINE

It satisfies or your money back.
Write for sample order.

SOLARINE DEPOT, TORONTO.

Bronze Powders

GOLD PAINTS, when wanted, can be
quoted at very low prices to the trade, by

GEO. RIDOUT & CO., Agents, Toronto

Memorial Windows

UNEXCELLED
DOMESTIC ART GLASS

H. E. St. George, London, Ont.

McCaskill, Dougall & Co.

Manufacturers



RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

Get your GLUES from

The GROVE CHEMICAL CO., Limited,

Appley Bridge, Lancs., England.

Our ordinary grades are better than ordinary, and we can supply special makes for
special purposes. SCOTCH GLUES, BOX GLUES, COLOGNE GLUES for Paper
Makers. SIZE of all kinds. Send your name for our printed matter.

Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works
or from the principal Color Dealers in Canada

TRADE



MARK

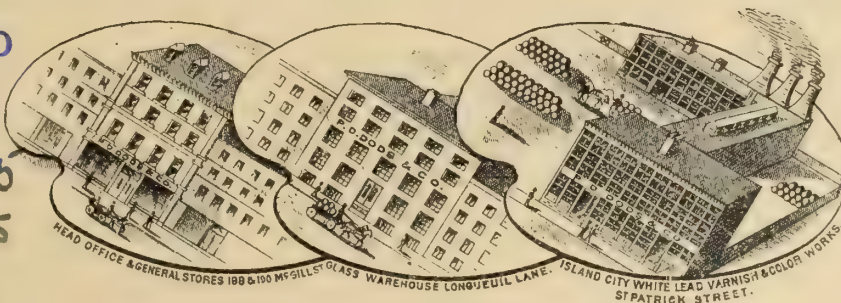
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OCT 22 1904

Cut Bush 25

Roy 65

ans.



This is the home of the "ISLAND CITY" Paint and Varnish Works.

P. D. DODS & CO., Montreal, Toronto, Vancouver

Wagner's Carriage Paints

PREPARED READY FOR THE BRUSH.
QUICK DRYING.
VARNISHING UNNECESSARY.
QUARTS, PINTS, HALF-PINTS.

Quality and Durability absolutely unequalled.

Explicit directions.

Any inexperienced person can do the work.

Excellent also for PAINTING STORE FRONTS, LAWN and PORCH CHAIRS, SETTEES, FURNITURE, WINDOW SASH, IRON FENCES and RAILINGS,
FLOWER POTS, BOATS, ETC.

A paint that the hardware dealer can recommend without reservation—the best general purpose paint made.

QUARTS, PINTS, HALF-PINTS.

WRITE FOR PRICES.

STANDARD PAINT & VARNISH CO., Limited
WINDSOR, ONTARIO.

Window and Interior Displays

Timely Hints and Suggestions

The Lack of Taste.

WHEN a merchant displays little interest in his window, he often hides behind the fact that he has no taste for window dressing, that is, that he has none of the artistic qualifications that show themselves in first-class windows. As is the case in most of the causes to which the unprogressive merchant assigns his unattractive windows, it is a characteristic which he does not endeavor to overcome. He really thinks it is so, and blames this rather than lack of effort on his part.

It may be true enough in some cases that a merchant doing his very best would make his windows look like a store-room, or would be utterly unable to acquire the desired effect. Such a man is, however, deprived of all excuse by the fact that his clerk, or one of them, is not likely to be as inartistic as he is. If so, it simply shows that a new clerk is required. Windows must be dressed even if the old staff must be dismissed and a clerk with some ideas of arrangement be engaged. However, it is so very seldom that the merchant is as bad as he says, that it only requires some effort and push on his part to convince himself that if not a born artist, he has some eye for effect, and at least the ability to arrange articles neatly.

Neatness is essential to the effective display, and a window in which it is a prominent feature is sure to have its attractions, although perhaps not so well arranged as if by an experienced window dresser. With time, too, he will improve his eye for beauty and the ease with which he will think of designs. Ambition and practice is all that is necessary to make a fair window dresser out of any man.

Observe Detail.

Although a large part of the work in connection with window dressing is the formation of a plan to be followed in the arrangement, it is not by any means all that requires close attention. Any clerk in the store may be capable of suggesting excellent ideas to the window dresser, but only the latter can be depended upon to carry out the idea in a way that will give the best results.

In the actual arrangement the time spent on detail is of great consequence. The general plan may be closely followed without obtaining a good effect, whereas the same plan may be made much more attractive by observing what would be usually called the unimportant part of the display.

Exposed framework may not interfere with the intended design, but it utterly ruins the value of the window. The plan is almost always general in its character, and, however good, may be spoiled by the filling in. The slant of one prominent article, the introduction of too many objects, or neglect to conceal a rough framework may rob the display of most of its value, however cleverly conceived the plan may be. Many of these faults may be avoided by a close inspection of the window from the street.

An Honest Window.

A point that must be observed in every window display is that the goods shown must be of the same class as the stock carried. An excellent quality must not be displayed in the window and the customer served from an inferior quality. The window is supposed to advertise just what is for sale inside, and the merchant who attempts to manage his business on a different principle will find a readily suspicious public will pass his store. A customer is ever willing to suspect that the goods he buys are inferior to those which benefit from their attractive arrangement in the window, and any proof of the existence of such a state of affairs will be magnified and turn away the trade of any one who discovers it.

It will often be found necessary to compare the two lines of goods, and no reticence should be shown, if a customer desires it, in removing the article shown in the window in order to prove that what is on the shelves is the same in quality. Nor should the window dresser be allowed to select all the best for the window, unless it is plainly shown to every inquirer that the goods in the window form the complete stock, and are for sale. A single case of an attempt to unload onto a customer a different quality may mean the loss of a great amount of trade, for corrupt prac-

tices are far more injurious than inefficient business ability. In fact, it is wise never to place the complete stock of any line in the window under any circumstances, particularly when the quality is of a high class, as the customer is apt to believe that it is customary to carry particular lines for window display and a lower class for sale. It is not an unheard of thing, and the public knows it.

How to Bore Holes in Plate Glass.

It is often desirable to bore a hole through plate glass to be used as a shelf or for some other purpose in the store. This has often seemed impossible to the trimmer or merchant in the smaller towns where there is no one especially prepared to do this work. Here is a simple and easy way to do it.

Get a small three-cornered file and grind the points from one corner and the bias from the other and set the file in a common brace for boring wood. Lay the glass you wish the holes bored in on a smooth surface covered with a blanket, and start the hole. You will soon make a slight impression on the glass.

Around this place a disk of putty, fill this with water. This will prevent too great heating from the friction. Resume the boring and in a few seconds you will have as clean a hole as though you were boring in wood. Use a little care and don't apply too much pressure while you are boring, as you are liable to crack the glass. Any size holes may be made in this way.

Send in Photos.

Hardware and Metal will be pleased to receive and publish photographs of window displays that have attracted attention. These pictures will receive the personal attention of a window critic and both good and bad points in the display will be commented upon. In this way the window dresser will in all likelihood discover faults in his arrangement that lessened its value, and will learn the features that gave the display its value. It is in a grasp of these points that the window dresser will be able in his future displays to avoid previous faults, and employ the good features. Photos need not be mounted on expensive cardboard.

RETURNED

JUL .8 1904

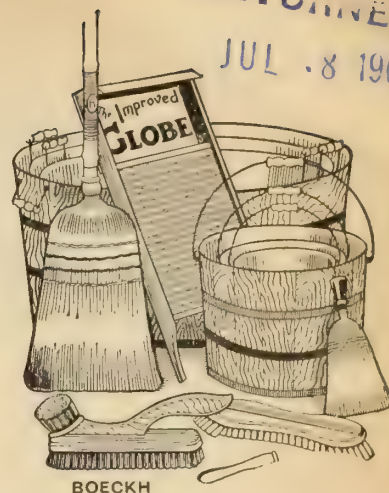
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UNITED FACTORIES, LIMITED,

OPERATING

BOECKH'S TORONTO FACTORIES.
 BRYAN'S LONDON FACTORIES.
 CANE'S NEWMARKET FACTORIES.



RETURNED

JUL .8 1904

TORONTO, May 19th, 1904.

Dear Sir :

The question of side lines for the hardware trade has been the subject of numerous articles in "Hardware and Metal" of late. As that journal has no "axe to grind" their suggestions on this point are no doubt made purely with a desire to further the interest of the retail hardware man.

If a hardware merchant wishes to carry anything besides ordinary staple hardware, our lines unquestionably offer the best opportunities as side lines, in fact, most of our goods can hardly be considered side lines to the hardware business from an up-to-date standpoint.

Perhaps your store is exclusively a man's store, if so we would suggest a line of Horse Brushes, Stable Buckets, Stable Brooms, Baskets, etc. (We take it for granted that you handle Paint and Varnish Brushes, etc.) But why should the ladies be excluded from your store? In two departments of the household, alone, we can offer a range of goods sufficient to bring them to you as steady customers. We refer to the kitchen and laundry. For the kitchen we have Pot and Sink Scrubs, Stove Brushes, Bake Boards, Butter Bowls, Chopping Trays, Mops, Potato Mashers, Rolling Pins, Wooden Spoons, etc. For the laundry, Pails and Tubs, Washboards, Clothes Horses, Clothes Wringers, Clothes Lines, Clothes Pins, Baskets, etc., while for general house use we can supply a wide range of Brooms, Whisks, Feather Dusters, Cobweb Brushes, Bannister Brushes, Scrubbing Brushes, Step Ladders, Carpet Sweepers, etc. Don't you think we have suggested enough to make a pretty fair Ladies' Department?

With the opening of Spring, the season of house-cleaning, the above lines are of particular interest to housewives, and a window tastefully dressed with this line of goods would unquestionably bring business to your store sufficient to more than compensate you for the trouble involved.

We would emphasize the fact that these lines are not novelties, but staple lines which properly go with the hardware business, and there is a certain steady demand the year round.

You will find that these lines offer a wider margin of profit than many staple lines of hardware.

Trusting that you will at least favor us with a request for quotations, we are,

Yours very truly,

UNITED FACTORIES, Limited.

P.S.—Illustrated Catalogue will be furnished on application.

STOVES AND TINWARE.

STOVES IN HARDWARE STORES.

SOME hardware merchants handle stoves and ranges. If all hardwaremen knew how easily this line could be taken up and profitably sold, certain it is that more hardware stores would carry a stock of these goods. If any class of hardware could be called staple, especially for smaller city and country trade, certainly it would be stoves and ranges. Yet it is rather remarkable that upwards of one-half the hardware dealers of the east do not handle them, whilst Hammernail in Hardware.

Stoves and heaters surely come under the general head of hardware; and the hardware store is the one where the buyer would naturally look for these goods. Yet there are in many cities and even large towns exclusively stove stores. In some of our eastern cities it will be found that house-furnishing stores and even dry goods stores are working up a large business in goods that the hardwaremen ought to control, and one such line is stoves. Let the hardware merchant remember that every time a house-furnishing or dry goods store in any way enters his field, another wedge has been driven that will help to crack open the safe where the hardwareman keeps his profits. And by giving these competitors a chance, by himself not fully covering the field, simply means that he is letting competition grow.

Some of the disadvantages to the stove business are quite apparent. The cost of distributing stoves is more expensive than some lighter and higher-priced goods, such as cutlery, tools, etc. Properly handling stoves would probably require at least an extra man. When a sale is made, the job is not considered as finished until the stove is set up—and sometimes a defective chimney will even then cause the dealer much trouble—and it is necessary for him to prove that the draft and not the stove is in the wrong. Then, too, it may be pointed out that the handling of stoves requires a large investment—that often they must be sold on instalments—that

no small amount of trouble is brought to the dealer in making his collections, etc. All this is true, but, on the other hand, the large business in stoves comes at a season when the regular hardware business is dull. The sales made on stove repairs and fixings, of a good established stove trade, will pay the wages of an extra man—and if carefully looked after will show a good profit in addition.

Selling stoves and ranges will bring to the hardwareman many new customers. When people begin housekeeping, one of the first things to be bought is the range. And to the hardware store or house-furnishing store that sells that range will follow much other business from that same customer—and often the sale of that first range will result in a lifelong customer being made. The profit on stoves is good, while the profit from the sale of supplies is large. After the trade is once established the business is easily held. Ranges and stoves are always in demand; the goods are staple.

As in adding any new line, it is a good idea to put some one clerk in charge of that end of the business and let him keep thoroughly posted on the line. Get the right man, and the hardware merchant will find the stove business a profitable adjunct to his regular trade. Care should be taken to get an agency for a well-advertised stove, and one that is high-grade. The best business can be built up on a line that will give entire satisfaction. More clean money can be made by selling the very best stoves, even if the price is somewhat higher than that at which an inferior grade could be sold.

As in every other business, one of the best advertisements a store can have is a pleased customer—this is especially true when a new line is being added—and even more true of a line such as stoves and ranges than of almost any other goods. For this reason it is of utmost importance to sell stoves that will give the best of satisfaction.

Subscribe to the

OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish, Chemical and Drysaltary Trades.

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Sample for 10 cents.

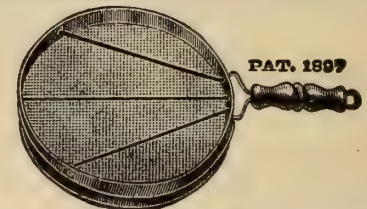
SCOTT, GREENWOOD & CO.
19 LUDGATE HILL LONDON, ENG.



COVERT MFG. CO.
West Troy, N.Y.
Steel Carriage and Wagon Jacks
Harness Snaps, Chain, Rope and Web Goods, etc.
SOLD BY ALL LEADING JOBBERS.



PRIEST'S CLIPPERS
Largest Variety.
Toilet, Hand, Electric Power
ARE THE BEST.
Highest Quality Grooming and Sheep-Shearing Machines.
WE MAKE THEM.
SEND FOR CATALOGUE TO
American Shearer Mfg. Co., Nashua, N.H., USA
Wiebusch & Hilger, Limited, special New York representatives, 9-15 Murray Street.



The FAIRGRIEVE GAS TOASTER

Retails at 25c. The only Toaster guaranteed to toast on gas, gasoline or blue flame oil stoves without taste or smell. Write for prices.

THE FAIRGRIEVE MAN'FG. CO.,
295 COLLEGE ST., TORONTO.

U. S. Branch: 289 Jefferson Ave., DETROIT
Agents for Great Britain: Heine, Solly & Co., Sutton House, 2 Old Street, London, E.C.



VORTEX HOT BLAST COAL STOVE

for Soft Coal,
Lignite,
Hard Coal,
Wood,
and
lighter
fuel.

For sale
by

E. T. Wright & Co., Hamilton, Canada.

Have you
tried it?
Tried what?
**SELLING
MANTELS.**



This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

DIAMOND EXTENSION STOVE BACK

They are easily
adjusted and
fitted to a stove
by anyone.

Patented, July 11th, 1893.

Canadian Patent, June 14th, 1894.

Sold by
Jobbers
of - - -

Please your
customers by
supplying them
immediately
with what
they want.



EXTENDED.

**Hardware
Tinware
and
Stoves.**

Manufactured by **THE ADAMS COMPANY**, Dubuque, Iowa, U. S. A.

" " **TAYLOR-FORBES CO., Limited**, Guelph, Ontario.

This Coil

P-H



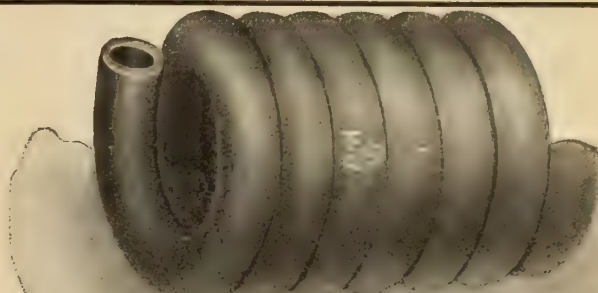
is made of our celebrated $\frac{3}{4}$ P-H Wrought
Iron Pipe. It was taken at random from our
stock and was bent cold. The inside diameter
of the coil is but two inches.

**The Quality will be remem-
bered long after the price
is forgotten.**

PIPE THAT IS PIPE

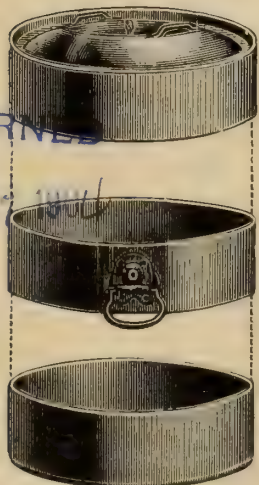
If your jobber does not carry this material,
write us, and we shall see that you get it.

Write for Quotations.



Page-Hersey Iron & Tube Co., Limited, Guelph, Can.

Davidson's Milk Can Trimmings and Milk Cans with broad hoop patent bottoms



**IN COMPLETE
SETS.**

"BROAD HOOP" Pattern
—Composed of the following:
1 Broad Hoop Bottom, 1
Cover, 1 Centre Hoop 6 in.
wide, 20 gauge, 1 Broad Top
Hoop, 1 pair Cover Handles,
1 pair Side Handles.

give great satisfaction
and are justly entitled to their
popularity.

Our **BROAD-HOOP BOTTOM** has all the
advantages of a Seamless Bottom without the
strain that spinning entails.

BOTTOMS can be sweated in with very little
solder.

BOTTOMS are concave, draining to the
centre, and are therefore easy to wash out and
will not corrode.

Top bands are shouldered and all bands have
retinned edges.

PATENT FLUSH SIDE HANDLES.

**WE CAN SUPPLY BEST QUALITY TINNED IRON
AT LOWEST MARKET PRICES.**



Heavy Rolled Edges make our **PATENT BOTTOMS**
doubly durable and waggon and factory floor
protectors.

The THOS. DAVIDSON MFG. CO. Limited, . . . MONTREAL.

HEATING AND PLUMBING

SOME POINTERS FOR PLUMBERS.

IN the following, from the pen of "The Judge," in the Plumbers' Trade Journal, Canadian plumbers will find some thoughts worthy of attention: "I like to take a cheerful view of things; to share in the optimism of the younger men whose faith in men and morals is still in the ascendant! If it were not for the enthusiasm of our young men, for the incense they burn before the altars of Faith and Hope, the world would be a sorry place indeed, and you and I, brother, who have been in life's race these many years, would not find zest in the battles they are fighting. Yes! Yes! It's very hard to take a cheerful view of the plumbing business when so many irritating features present themselves. But my word for it, oh, friend, you'll find it much pleasanter to still keep on the firing line and cease the useless complaining and criticising that is not accompanied by action.

It's robbing you of your bank account now, and by and by will rob you of physical and mental health, which is still worse. Yes, the labor problem is a delicate one; so is the loose credit system; so is the attitude of organized labor on the apprentice question; so is the laxity of plumbing laws; so is the laxity of latter day trade protection; so is the injustice of unfair and ignorant competition; so is the manufacture and sale of shoddy materials, and so are many other things that we encounter daily. Our boys are out on the firing line battling to right these things. Don't sit still; don't discourage them.

About the meanest cusses in the plumbing trade just now are the makers and users of substitute materials, the stuff that is sold with a juicy discount and a guarantee of being "just as good." The manufacturer is, if possible, more deserving of censure than the buyer of his goods, but both in my opinion are pirates and robbers—yes, ulcers defiling the fair forms of clean business and honest methods. When a man or a firm by the exercise of study, ingenuity and experiment devises an article, fixture, tool, valve or other implement of trade that is a successful departure from or a distinct improvement upon that in general use, justice and fair play should

practically ensure a commercial reward commensurate with the value of their product. Do they get it? My observation of and reflections upon such matters for the last twenty years prompts the emphatic negative expression "no!"

Who gets it? The parasites who handle the cheap imitation of the inventor's original creation and the man with the scissors or the camera who produces the grandest and sometimes the richest catalogs without a single original idea or design between its covers. I don't know anything about patent laws or the legal status of an original inventor; neither do I fully understand the law of copyrights; but I do know that the vicious practices referred to are very common to the plumbing trade, and that it is high time some one called the trade's earnest attention to it, and suggested some means of protecting the man who has enriched and advanced the trade with some valuable article, but also of protecting ourselves in everyday business competition against the man who uses the cheap and dishonestly made substitute.

It is not possible, nor even practical under any possible means now attainable, to have all materials or fixtures bear the stamp of approval from some central authority recognized by the plumbing trade, but it is eminently practical and would go a very long way in improving the conditions referred to, if the National Association of Master Plumbers would refuse to handle any article of trade use, from a porcelain bath tub to a gas pipe fitting, that did not bear the name of the manufacturer, either cast, painted or burnt upon the article itself.

This, I admit, would only be a partial cure, but a complete one would possibly be devised through the more general consideration of such matters that would follow the inauguration of such a rule. Of course, the pirate who uses a pin in his valve, where the other man used a screw; the fellow who substitutes a copper ball and a rubber seat for a rubber ball and a brass seat; the house that photographs Brown's "Speedway" closet, and after a change of the integral jet from the right seat to the left, re-christens it "Smith's Driveway"

closet," and the rest of their numerous tribe would have to be dealt with in other ways. On the whole, you'll find it good policy to preach and to practice the use of honest goods, to denounce the despicable practice of "substitution" and to so perfect your organization that the members who are honest, capable and conscientious will have a fair field and no favor as the very least they are entitled to in competition with men whose methods to-day are robbing inventors, robbing honest manufacturers, making competition a curse and perpetrating wrongs upon the public that are positively criminal.

Declare for an Open Shop.

EVIDENTLY the plumbers of Davenport, Iowa, have had some experiences similar to those of the Montreal employers, for they have, like their Montreal brethren, declared for an open shop in no uncertain tones. They have adopted the following resolutions:

Whereas, We, the members of the Master Plumbers' Association of the City of Davenport, believing it to be to the best interests of harmony between employers as well as to the public in general: be it

Resolved, That we declare for what is known as the "open shop," reserving the right to hire and discharge whom we please, but that we will at all times give preference to union men, for the reason that we believe the right of organization for mutual benefit should be accorded our employes equally with ourselves; be it further

Resolved, That an Arbitration Committee, consisting of three members selected from our association be appointed to meet at any time with a like committee of the journeymen plumbers or steam-fitters to settle by arbitration any questions in dispute that might arise; be it further

Resolved, That we pledge ourselves to take back all of the employes now locked out necessary to carry on the work now on hand, to report for work Tuesday, May 10, 1904, at 7.45 a.m., and

WINDOW GLASS

Large stocks are now arriving and assortments are well maintained. Glass is in splendid condition. Send us your specification now, and have your order filled before assortments are depleted. The brand is good and the price is right.

A. Ramsay & Son,
MONTREAL.

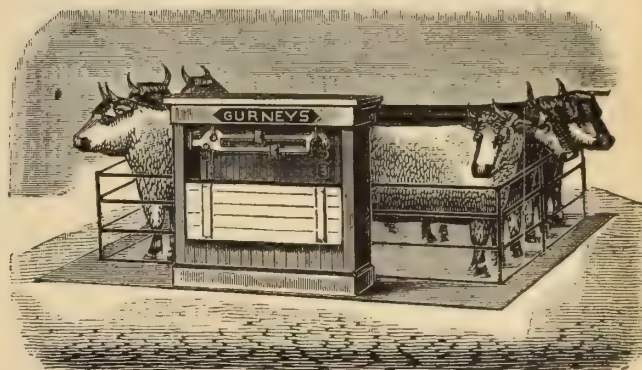
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1842

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THE GURNEY STANDARD SCALES

Absolutely Accurate and Reliable. The Best of Material and Workmanship. Recognized throughout Canada as

"THE STANDARD"



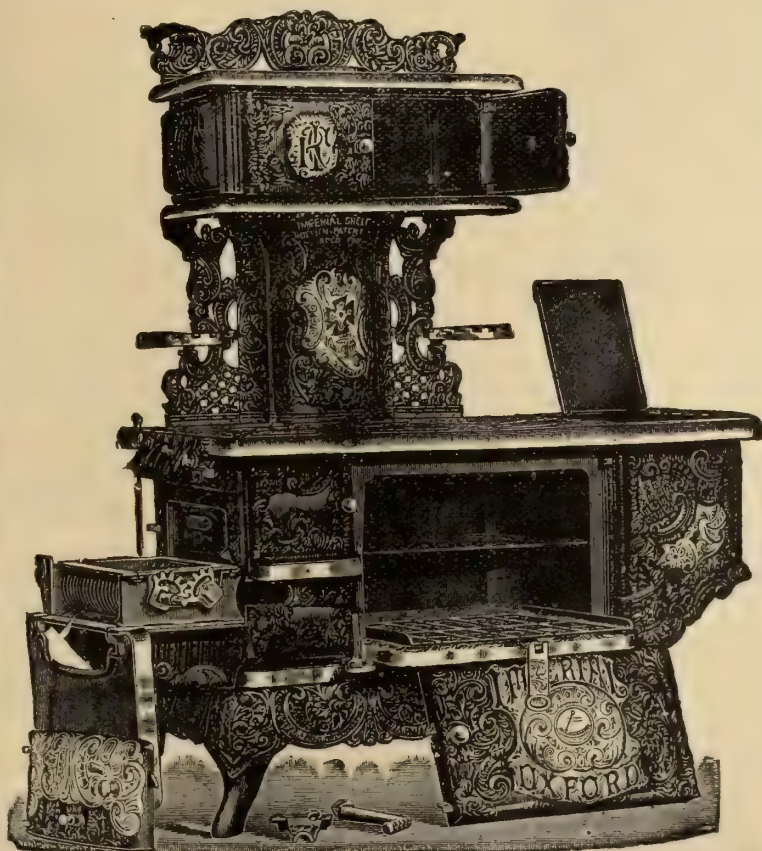
We make scales of every description. Established 1856. Send for catalogue and printed matter.

The Gurney Scale Co., Hamilton, Ont.

Eastern Warehouse :

Western Warehouse :

The Gurney-Massey Co., Limited Montreal, Que. **The Gurney Stove and Range Co. Limited,** Winnipeg, Man.



The Imperial Oxford Trade of Your District

is the best range business there. Wouldn't you like to have it? It means more business and better business for you. We are appointing agents for the

Imperial Oxford Range

in districts where we are not already represented. Won't you write us for particulars?

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS :

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., LIMITED
CALGARY, ALTA.

the balance as soon thereafter as necessity demands; be it further

Resolved, That the secretary be instructed to forward a copy of the above resolution to the secretary of the Journeymen Plumbers' and Steam-Fitters' Association, with instructions that an acknowledgment or acceptance thereof will be unnecessary, as their reporting for duty will be sufficient evidence of their intentions to accept of and concur in this action.

On May 10 the men, in conference with a committee from the association, refused to work under the resolutions, when the following rules were adopted and signed by both workmen and employers.

1. The hours of actual work shall be from 8 a.m. to 12 noon, and from 1 p.m. to 5 p.m.

2. All employes shall be on their respective jobs and at work as per above hours.

3. Time and a half will be allowed for all overtime, excepting Sundays, Decoration Day, Fourth of July, Labor Day, Christmas, New Year and Thanksgiving Day, for which double time will be allowed.

4. On all work done outside of town the hours of work shall be governed by local customs at places where work is done.

5. Apprentices will be employed at the discretion of employers.

6. Helpers will be supplied when deemed advisable.

7. Car fare shall be allowed at discretion of employers.

8. All employes shall be responsible for any destruction of property or material caused by their carelessness or neglect.

9. No discrimination shall be made between union and non-union men.

10. Whenever a complaint of improper work shall be lodged against a journeyman he shall be compelled to repair the same at his own expense. He, however, shall be allowed to remedy any such work after working hours on the day of the complaint.

11. All of the above rules are hereby accepted and agreed to.

Montreal Strike Ended.

In reply to an inquiry of Hardware and Metal regarding the strike situation, Joseph Thibeault, the president of the National Plumbers' Association, said: "There is practically no strike now, as far as we are concerned, al-

though there has been no agreement whatever between the master plumbers and the union. At the last meeting of the master plumbers not a single firm reported a shortage of men, but all say they have all the men they require, and are open to take any amount of work. The reason of this is because of the large number of plumbers arriving from the Old Country and filling the ranks of the strikers, so that we are in no way dependent upon them. It is a matter of no concern to us now how long the strike under present conditions may last."

To Holiday in Scotland.

Robert Ross, president of the Toronto Master Plumbers' Association, left on Thursday for a two months' holiday among the heather and the hills of his native land, "Auld Scotia." Mr. Ross, who is accompanied by his brother, Thomas Ross, is counting on having a gay time. He has had several busy years since he last crossed the ocean, both in his business and in connection with the association. Now he will leave all cares behind him and enjoy the holiday so well earned. He was given a good send-off by the plumbing fraternity of Toronto.

Galvanizing Small Articles.

AN improved method of galvanizing small articles, such as nails, screws, tacks, rivets, washers, etc., is now being brought to the attention of manufacturers. Representatives of the International Specialty Co., of San Francisco, Cal., are now in New York, at the Marlton Hotel, 5 West Eighth street, for the purpose of introducing an apparatus invented and patented by George Porter, an expert galvanizer. This apparatus, it is claimed, will be the means of placing on the market a number of galvanized goods which are not now carried in stock.

In the old method of galvanizing, the articles are placed in perforated dippers or baskets, dipped into a tank of molten zinc, left there till brought to the same temperature as the zinc, then taken out and shaken into an inclined chute leading to a water tank, leaving a large quantity of surplus metal adhering to the articles. The contact with water makes them very rough, and often, in the case of small articles, a large percentage of them will remain stuck together in bunches. The articles when taken out of the water are sifted in sawdust to dry them and the bunches of

stuck articles are picked out. By this method it is almost an impossibility to produce a satisfactory galvanized wood screw, for the reason that the slot and the thread are filled up with surplus metal. Washers are also difficult to galvanize, owing to the large amount of flat surface on them and the liability of their sticking together. The water cooling also has a bad effect on the metal of which the articles are manufactured.

By the Porter method, as described by the inventor, the articles, after being dipped in the molten zinc, are thrown into the hopper of a machine which does the rest. It handles anything from a small tack to a 60-penny nail at the rate of from 2,000 to 3,000 pounds per hour, and a boy can run it. It removes all unnecessary surplus metal, cools without coming in contact with water and delivers the articles into kegs or boxes ready for shipment with one operation. Its work is done so quickly that it allows the galvanizer to use his metal at a lower degree of temperature, and hence a less amount of dross is produced and the life of the metal tank is prolonged. The cooling process is so gradual that the temper of the metal is not affected, leaving it in its original soft and malleable condition. The advantages of such a process on such articles as clinch or boat nails and rivets can easily be seen. On screws the zinc is so evenly distributed that the thread and slot in the head are left perfect.

This process, it is claimed, will cheapen wire nail galvanizing to such an extent that all wire nails can be galvanized. The galvanizing of nails will greatly increase their holding power, at the same time making them absolutely rust proof, so that they can be shipped to any part of the world or kept in stock for any length of time without fear of becoming rusty or damaged by dampness.

This apparatus is not a matter of experiment, one of the machines having been in practical operation for some time in the Porter Metal Works, San Francisco.

Made the First Box Stove.

Ariel L. Thomas, who is credited with having manufactured the first box stove, died May 4 in Colrain, Mass., aged 87 years. He was a native of Colrain. For many years he conducted a foundry at Foundry Village, in Colrain, as a member of the firm of Thomas & Gleason, and later by himself. His box stove was not patented, and was taken up by other manufacturers.

CHARLES BAYNES, England.
 MAKER OF THE KNUZDEN BROOK, BLACKBURN,
"CLICK-CLACK"
 HACK SAW BLADES.
 In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited

HANOVER, ONTARIO.

Manufacturers of **"Saugeen Brand"**
 the Celebrated **OF PORTLAND CEMENT.**

Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export. With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— Emlyn Engineering Works
 "Machinery," Newport. NEWPORT, MON., ENGLAND



Will Hold Up a Shelf !

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,

New Haven, Conn., U.S.A.

To Manufacturers' Agents

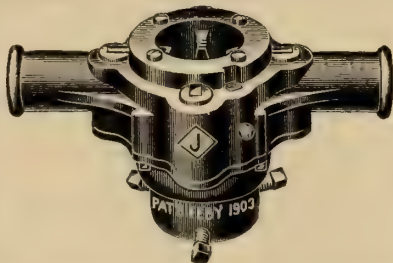
ives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of inquirers in our various offices throughout Canada and in Great Britain without charge.

Address

Business Manager

HARDWARE AND METAL
 Montreal and Toronto



It is a fact that one man with our **PATENT PIPE DIE** can easily do the work of two men with any other. Send us your address and we will explain HOW and WHY.

A. B. JARDINE & CO.

Mfrs. TAPS and DIES.

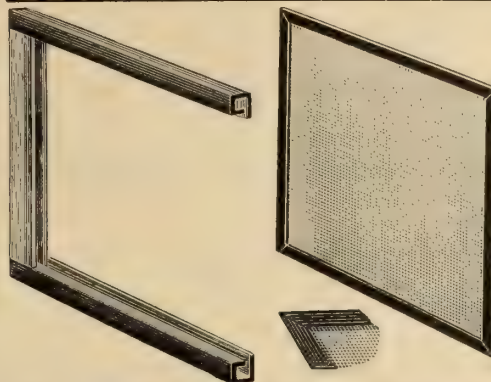
HESPELER, ONT.

PIG IRON

FOR
 IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.



SATISFACTION

results to everybody if you sell our **METAL—all Metal—SCREENS.** They cost no more than wood, are stronger and more workable.

SEND FOR CIRCULAR.

C. M. CUTTS & CO.

Makers, Toronto Junction.



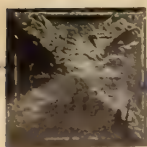
Pedlar's "Perfect" Metal Lath

CHEAP AS WOOD

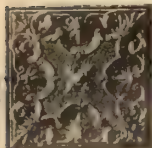
Delivered to any railway station in Canada, for 10c. per square yard. Discount to dealers. Circulars and samples on request.

Pedlar People, Oshawa, Can.,
 or 767 Craig St., Montreal, Que.

Classified Designs in Metal Ceilings



No. 4001



No. 4002

assist in securing orders for the reason that they appeal to the good taste and judgment of a purchaser.

There is no question about our having the most saleable line of Metal Ceilings on the Canadian Market, and where we have the opportunity of co-operating with a dealer, continual orders have always been the result.

Do not say, "Oh, there is no Metal Ceiling work in my town," but put a little fresh bait on your hook and cast about. There is such a thing as making trade, and a sample Metal Ceiling erected, soon brings further orders.

Make up your mind that you are going to do business, and you will find orders where you least expected.

We will supply designs and blue prints and help you to start in right.

There is no time like the present—ACT NOW.

Representatives:

Clare & Brockest, Winnipeg
Ellis & Grogan, Calgary

The Metal Shingle & Siding Co., Limited

Preston, Ont.



No. 4003



No. 4005

Building Permits.

MONTREAL.

A. Lafrance, Dufferin street, two dwellings, \$1,500.

A. Perrault, 461 Plessis street, dwelling, \$3,000.

O. D'Amour, two dwellings, \$5,000, Dorion street.

J. G. G. Kerry, four houses, Hutchison street, \$7,200.

A. Rochon, Chausse street, three dwellings, \$2,800.

Jacob Levi, Dufresne street, three dwellings, \$28,000.

O. Depate, three dwellings, 72 Visitation street, \$4,000.

Canadian Rubber Co., 1,000 Notre Dame street, building, \$8,000.

M. Tannenbaun, alteration on house, 111 Metcalfe street, \$2,200.

V. Boissorineau, 1,502 St. Hubert street, two dwellings, \$5,000.

J. W. Stewart, 537 William street, three-storey building, \$2,300.

Sovereign Bank of Canada, building at 234 St. James street, \$150,000.

J. W. Orkin, building, Notre Dame, \$23,000; also building to cost \$17,000.

Canadian Rubber Co., alteration on building, Notre Dame street and Papineau avenue, \$1,500.

TORONTO.

A. B. Dick, dwelling, Wood street, \$3,400.

W. Murray, two dwellings, Spadina road, \$5,400.

C. E. Walton, two dwellings, Smith street, \$3,000.

J. C. Malcomson, dwelling, Rusholme road, \$4,700.

John Inglis & Co., office, Strachan avenue, \$5,000.

McColl Bros. & Co., stable, Don Esplanade, \$1,600.

G. Wills, six dwellings, Ossington avenue, \$7,200.

V. L. Scott, two dwellings, Margueretta street, \$3,000.

R. Saunders, four dwellings, Delaware avenue, \$7,500.

R. E. Kennerer, two dwellings, Wright avenue, \$3,000.

R. West & Co., a residence, King and Wilson avenue, \$5,000.

F. W. Stair, addition to residence, St. George street, \$1,500.

Grand Trunk Railway, freight shed, corner of Simcoe and John streets, \$10,000.

C. R. S. Dinnick, a dwelling on Bernard avenue, \$2,700; also three dwellings on Kendall avenue, \$8,100.

BRANDON, MAN.

R. E. Bell, house, 13th street.

D. H. Scott, residence, 8th street.

John Scott, residence, 1st street.

A. A. Evans, house, 13th street.

E. Johnson, residence, 7th street.

T. H. Milburn, house, 3rd street.

Ed. Barnwell, residence, 1st street.

Ed. Gregson, residence, 10th street.

Geo. Miller, residence, 10th street.

C. Splayford, residence, 3rd street.

E. Shingfield, residence, 1st street.

James Turnbull, residence, 6th street.

Bernard White, residence, 10th street.

Jason Burchal, residence, 5th street.

P. W. Cook, residence on 4th street.

C. Whillier, residence on Pacific avenue.

J. N. Kirchoffer, residence, Russell street.

Alex. McDonagh, residence, 1st street.

Earl McCartney, residence, 13th street.

Geo. C. Carbert, veneered residence on 2nd street.

Wm. Currie and Alex. McEachern, three houses on 1st and 2nd streets.

Light, Heat and Plumbing Notes.

The directors of the Maritime Auer Light Co., Ltd., at a meeting in St. John, N.B., decided to go into voluntary liquidation.

Building Notes.

A new Methodist church is being built in Baldur, Man.

The First Baptist Church, Winnipeg, is to be enlarged and improved.

The Aberdeen Hospital, New Glasgow, N.S., is being extended.

An addition is being made to the Glenboro school, Glenboro, Man.

The Antigonish C.M.B.A. Hall Co., Ltd., are erecting a building in Antigonish, N.S.

Tenders are being called for the construction of a new fire hall in Winnipeg.

The shipping offices of the International Coal Co., Sydney, N.S., are to be enlarged.

Tenders are being called for the erection of the Deer Park public school, Toronto, by B. Sinclair, chairman.

D. Bawlf is about to erect a five-storey building near the site of the Massey-Harris showrooms, Winnipeg.

J. R. Baker and I. J. Phinney are calling for tenders for the erection of an Anglican church at Napinka, Man.

The board of the Medical College in Winnipeg have secured a site adjoining the present one for the proposed new college buildings.

It is reported that the contract for the new hotel and station at Winnipeg has been let to Peter Lyall & Sons, Montreal.

The Toronto Pharmacal Co. will build a three-storey warehouse on King street west, near Spadina avenue, at a cost of \$15,000.

In addition to their new warehouse, Gordon, Mackay & Co. will erect a factory on the north side of King street west, to cost \$25,000.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE world's production of copper during the last three years is estimated by H. R. Merton & Co., London, Eng., in gross tons, as follows:

	1903.	1902.	19 1.
Australia.....	29,000	28,640	30,875
Canada.....	19,320	17,485	18,800
Chili.....	30,930	28,930	30,780
Germany.....	21,205	21,674	21,720
Japan.....	31,300	29,775	27,475
Mexico.....	45,315	35,785	30,430
Russia.....	10,320	8,675	8,000
Spain and Portugal....	49,740	49,790	53,641
All other countries....	29,980	27,400	29,677
United States.....	298,760	292,870	265,250
Total.....	565,820	541,295	516,628

• • •

The main building of the plant of the Stratford Chair Co., Stratford, Ont., will be 60x100 feet, and three storeys high. A power house 30x38 feet, and a drying kiln, two storeys high with three drying apartments, will also be built. It is probable that the building material will be cement blocks.

• • •

The annual meeting of the shareholders of the Payne Consolidated Mining Co. was held in Montreal recently. The following directors were elected for the ensuing year: Lt.-Col. F. C. Henshaw, president; Hon. L. J. Forget, vice-president; A. W. McCune, J. Dillon, W. G. Ross, F. B. Mathys, R. Forget, Wm. Hanson, C. E. L. Porteous.

• • •

The Quebec Government is being petitioned by J. R. Woodward, Sherbrooke, Quebec, to aid in the establishment of a smelter in the province, in order that the development of the copper bearing properties scattered throughout the province may be assisted. At the present time all the ores mined are sent to the smelter at Staten Island, N. Y., for treatment, which costs \$4.65 per ton. If there were a smelter in the close vicinity the cost of smelting would not probably exceed 90c per ton.

• • •

The re-organization of the Lake Superior Consolidated Co. is now complete. Speyer & Co. have closed the sale of the securities of the company, amounting to \$5,050,000. The new company are now in possession of the property, and very shortly it is expected that the plant at Sault Ste. Marie

will be in full operation. At a special meeting of the Ontario Cabinet an order was passed declaring the provisions under which the bonds of the company, to the amount of \$2,000,000, are to be guaranteed by the Government, had been complied with.

Notes.

R. E. Estey, lumberman, St. John, N. B., has assigned, the liabilities being \$135,000, and the assets \$105,000.

The Pembroke Observer says that the National Mfg. Co., Pembroke, are now placing their cream separators upon the market.

The Anderson Furniture Co., New Castle, N. B., are seeking incorporation with a capital of \$150,000, half of which is paid up.

The Standard Paint and Varnish Co. are arranging to build and equip a new factory at Windsor, Ont., to cost \$10,000.

The Frontenac Cereal Co., Kingston, is planning to erect a \$250,000 mill at Vancouver, to take care of the trade in western Canada.

Within a very short time the machinery in the new 200-ton concentrator of the Rossland Power Co., Rossland, B. C., will be running.

The Canadian Heating and Ventilating Co., Owen Sound, Ont., are opening up a warehouse in Winnipeg, from where the west will be supplied.

The Fort William Journal says that a company known as the American Brick Co. have secured about 60 acres near the State River bridge, and are going to manufacture brick.

The Hamilton Herald says that the Diamond Glass Co. are talking of starting again a glass factory in Hamilton. If the factory is re-established 300 men will probably be employed.

A meeting of the directors of the Dominion Iron & Steel Co. was held at Montreal recently, for the purpose of preparing the statement for the annual meeting, the date for which has not as yet been set.

The planing mill owned by Henry Lindep, on Moore street, St. Thomas, Ont., has been destroyed by fire. The total loss is \$12,000, \$10,000 on building and machinery, and \$2,000 on stock. The mill will be rebuilt.

Dr. W. A. Parks, lecturer in mineralogy and geology, Toronto University, has been selected by the Dominion Geological Survey to make an investigation of the recent mineral discoveries west and north of Lake Temiskaming.

The Canadian Westinghouse Co., Hamilton, who are having erected in that city a most up-to-date factory building, are now preparing plans for office buildings which will cost in the neighborhood of \$25,000.

The new sawmill of Murray & Gregory, St. John, N. B., has been completed. The capacity of the mill per day is 75,000 feet of long lumber, 25,000 shingles, 6,000 to 8,000 pieces clapboard, 40,000 pieces laths, and 25,000 staves and headings.

The Pure Gold Mfg. Co., Toronto, are seeking a permit from the City Board of Control to erect a factory warehouse just west of the College street fire hall. The company state their willingness to comply with all the conditions specified by the new building by-law.

Companies Incorporated.

J. Curry Co., Limited, Toronto; capital, \$50,000; purpose, to carry on a general brokerage business.

The Niagara Falls Milling Co., Limited, Niagara Falls; capital, \$50,000; purpose, to deal in grain and cereals of all kinds.

The Canada Smelting Co., Limited, Montreal; capital, \$16,000; purpose, to carry on in general the business of smelting all kinds of metals.

The Dominion Brokerage and Contracting Co., Limited, Ottawa; capital, \$20,000; purpose, to carry on business as brokers, contractors and general agents.

Cameras, Limited, Montreal; capital, \$20,000; purpose, to manufacture and otherwise deal in cameras, lenses, lanterns, lantern slides, photographic plates, etc.

Walker Steel Range Co., Limited, Windsor; capital, \$75,000; purpose, to manufacture and sell steel ranges, sheeting, siding, and all kinds of metal work.

The Cornell Brewing and Malting Co., Limited, Lindsay; capital, \$40,000; purpose, to carry on the business of brewing of beer and manufacturing malt.

The Reid Featherbone Mfg. Co., Limited, London; capital, \$20,000; purpose, to manufacture and sell featherbone, featherbone belts, girdles, neckwear and other featherbone novelties.

W. B. Reid Co., Limited, Toronto; capital, \$40,000; purpose, to carry on

in all its branches the business of wholesale and retail merchants of cigars, tobaccos, etc.

Licenses Granted.

S. H. Knox & Co., incorporated in New York State, have been granted a license to carry on a general mercantile business in Ontario, provided that a capital not larger than \$100,000 were used.

PEDLAR'S METAL LATH.

HARDWAREMEN in many centres have found it to their advantage to study the merits of the metal lath, as compared with the wooden one, and to persuade builders to use the former, thus opening a new line of trade for themselves. The Pedlar People, Oshawa, Ont., issue a booklet which may furnish retailers with valuable suggestions along this line.

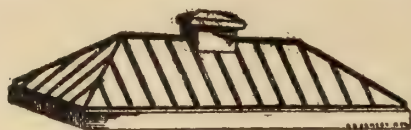
In the introduction to it they say:

"Up to the present time the metal plastering lath has been used only in buildings where fire-proofing was the essential requirement, and while that is one of the principal advantages of Pedlar's "Perfect" lath, we, by the adoption of a new method of manufacturing, are able to offer what is conceded to be a superior article at a price that will enable it to be used in any building. Aside from its fire-proof qualities, the "Perfect" lath has the following advantages over wooden lath to recommend it. The key is positive. The actual size of the mesh is only 3-8 in. x 1-2 in., so that when the plaster is applied the metal lath becomes practically embedded in the mortar, making it impossible for the mortar to crack and fall off. It can be applied more quickly than wooden lath, each sheet being 18 inches x 96 inches, which when applied covers 1 1-3 square yards, and to cover this space on 16 inch centres 36 staples only need be driven. A good mechanic, therefore, could cover a great many more times the amount of space with the "Perfect" lath than would be possible with a wooden lath. It takes no more mortar than wood lath. It has been demonstrated in actual practice that 1 1-2 yards of sand and 5 bushels of lime will cover 100 square yards of "Perfect" lath, this quantity being sufficient to cover the metal fabric thoroughly on both sides. Using the Pedlar "Perfect" metal lath no difficulty is experienced in the annoyance of having a good job spoiled by the sap from the lath staining through the plaster, as is the case with wood.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.



Our Skylights

are—
DUST,
WIND and
WEATHERPROOF.

People who buy the Ormsby Skylight are satisfied.

WRITE ABOUT IT.

A. B. ORMSBY LIMITED,
Cor. Queen and George Streets,
TORONTO, ONT.

Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

U.S. and Foreign Patents, Caveats, Copyrights and Trade Marks. Military and Naval Inventions a specialty. Address,

Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP

Warren White Sulphur Springs,
Totten P.O., Virginia.

\$2 FOR THIS SMALL SUM THE **\$2**
MANUFACTURER and SUPPLY MERCHANT

may keep posted on new openings
for trade.

The CANADIAN CONTRACT RECORD

reports weekly all projected building and other
construction works throughout Canada as well
as new business enterprises.

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a year's subscription to

Canadian Contract Record

\$2 TORONTO and MONTREAL **\$2**

GLAZIERS' DIAMONDS



Our diamonds were first on the market and still remain first with up-to-date improvements. We claim for them **Superiority over All Others in Quality and Workmanship.**

Glaziers' Diamonds of every description, for all purposes, supplied.

Established 1815

CANADIAN AGENT

GODFREY S. PELTON
338 St. Paul St., - Montreal

A. Shaw & Son

52 Rahere St., E.C., London

BLACK JACK

TRY A
3 DOZ. CASE

A BIG WINNER



ASK YOUR
JOBBER FOR IT

SELLS ON SIGHT

MONTREAL STEEL WORKS, LIMITED.

SUCCESSORS TO ———
The Canada Switch and Spring Co., Limited.

Manufacturers of ———

STEEL CASTINGS

OPEN)
HEARTH
SYSTEM.

SPRINGS, FROGS, SWITCHES, SIGNALS, for Steam and Electric Railways.

CANAL BANK, POINT ST. CHARLES, : : MONTREAL.

. . FULL STOCK . .

Salt Glazed Vitrified

Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.

PORTLAND CEMENTS

Best German, Belgian and English
Brands.

FIRE BRICKS
FIRE CLAY
FLUE LININGS
DRAIN PIPES
HARD WALL PLASTER
CALCINED PLASTER
WHEELBARROWS
MORTAR STAINS.

A Full Stock of Builders' and Con-
tractors' Supplies.

W. McNALLY & CO.

40 to 52 McGill St. (Cor. Wellington St.)
MONTREAL.

Write for our quotations.

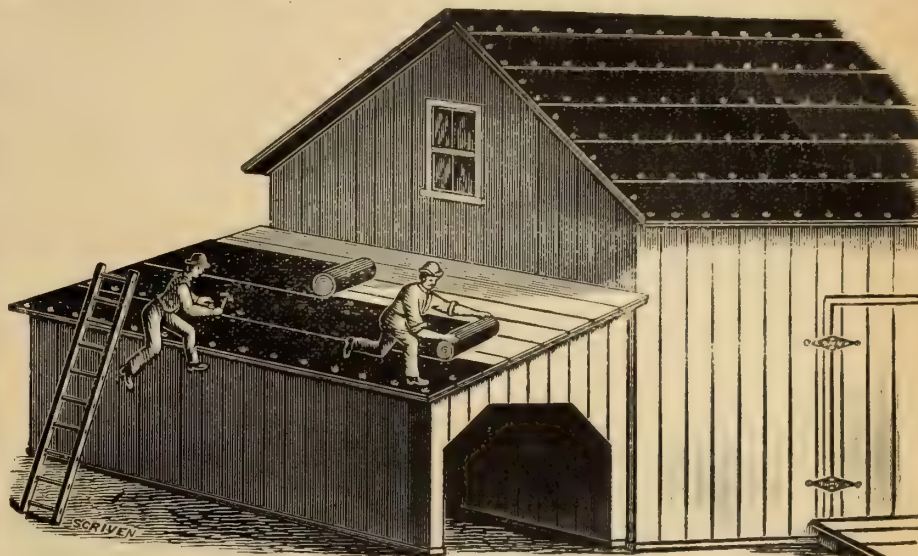
Permanent, Economical,
Handsome.

**Arrow Brand Asphalt Ready Roofing.**

Comes in rolls, ready to lay, with nails and cement.
All ready covered with white sea gravel. No further attention after laid.

A. C. JENKING, Sole Agent,**Room 215 Coristine Building, - MONTREAL.**

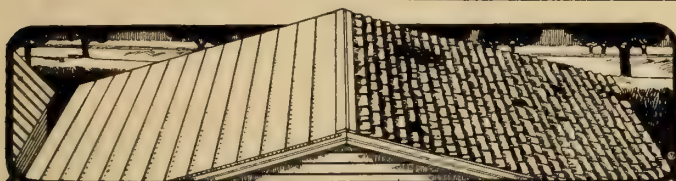
Sun, Frost, Water, Fumes DO NOT affect it. Write to-day for agency.

**USE MICA ROOFING**

For Flat or Steep Roofs. It is Waterproof,
Fireproof, quickly and very easily laid, and
cheaper than other roofing.

HAMILTON MICA ROOFING CO.,

60 Catherine Street North, - - - HAMILTON, CANADA.



CONSTRUCTION vs. DESTRUCTION.
CARE vs. CARELESSNESS.
BEST MATERIAL vs. POOR MATERIAL
REX FLINTKOTE ROOFING vs. ALL OTHER ROOFING.

REX Flintkote Roofing

The above tells the whole story, and means to the dealer a quick-selling, business-
bringing roofing vs. the ordinary kind that never sells, because people don't want it,
and when they are persuaded to try it never come back again. If you want satisfied
customers for roofing, you should write us to-day about REX Flintkote Roofing.

J. A. & W. BIRD & CO., 49 India Street, Boston, Mass.

**CHEESE PRESS SCREWS,
JACK SCREWS,
MORTISE MACHINES**

- AND -

GENERAL CAST HARDWARE.**THE H. R. IVES CO., MONTREAL.**

LIMITED.

The Saw That Sells Itself.

When placed in the hands of the intelligent mechanic the **ATKINS** High Grade Silver
Steel Hand Saw sells itself. You simply show it and the saw does the rest.

ATKINS Silver Steel Hand Saws with Perfection Handles are warranted
the **FINEST** Saws on earth in material, temper, grinding and finish.

Write for Catalogue and Prices.

E. C. ATKINS & CO.

C. D. TEN EYCK, Sales Agent for Canada.
Toronto Office: 30 Front St. East. Tel. Main 1896.



**ATKINS
ALWAYS AHEAD**

Leading Saw and Tool Manufacturers
Factories: INDIANAPOLIS, IND.
Northwestern Branch: Minneapolis, Minn.

FINANCE AND INSURANCE

A STATEMENT has been issued by the Russian Government on the financial situation with regard to the Japanese War. The statement reads: "The war, which broke out in spite of the peaceful intentions of Russia, found the finances of the empire in a satisfactory position."

"The effective capital of the Exchequer, which at the beginning of the year amounted to 182,000,000 rubles, has been more than doubled up to the present time, by reason of the diminution of the budget expenses. Now the whole sum at the disposal of the Exchequer exceeds 300,000,000 rubles."

"Despite this, the war expenditure must be very considerable, and on this account it has been thought prudent to discover a new method for providing funds. These funds might be borrowed from the State Bank to the extent of 500,000,000 rubles, but in order to avoid expending the effective capital at the risk of a disturbance of the money in circulation, and as the Government wishes to see Russia at the end of the war in the same steady financial position as before the outbreak of hostilities, the Finance Minister has considered it necessary to have recourse to an external loan."

"By imperial order of May 12 for an increase in the war funds the issue of a five per cent. external loan for a short term has been decided upon with a nominal capital of 300,000,000 rubles, or 800,000,000 francs (\$160,000,000), under the title of 'five per cent. State Exchequer bonds of 1904,' free forever from Russian taxes."

"On May 14, 1909, these bonds will be redeemable at the issue price, and must be presented for redemption in Paris."

"The flotation of the loan is intrusted to the Netherlands Bank, the Credit Lyonnais, and Hottinger & Co. of Paris."

...

A STATEMENT showing the percentage of increases in individual deposits in United States banking centres during the period from 1890 to 1903 has been compiled. The smallest percentage of increases are to be found in New Orleans, Baltimore, Boston and Philadelphia, New York follows, and then Chicago, Pittsburg, St. Louis and San Francisco in the order named. The feature of the statement is that the Atlantic ports are far behind the interior centres. Specific causes no doubt would appear in an extended examination of local conditions, such as the growth of trust companies in Boston and the attraction which their generally higher rates of interest have for deposits that might otherwise be carried in national banks; this probably would explain a certain amount of the decreases scored in New Orleans, for there appears no intrinsic reason why individual deposits in general should have fallen away to the extent indicated.

In New York's case the issue is open for discussion, and is a rather pretty one, whether the growth of such a banking item as individual deposits should be about

commensurate with the average of the country or whether the advances scored by the remainder of the country ought to have a cumulative effect at this point. To this end the item of individual deposits is an apt one, for its increase or decrease is not so readily brought about by external agencies of a temporary character as would be the case with other items in the bank statement. It is likely to indicate, therefore, as clearly as any, the permanent effect in one direction or the other, and so will serve reasonably well as a basis for discussing the question whether a percentage of growth that keeps just a little ahead of that in the points of comparison is to New York's detriment or credit.

NOTES.

Five German fire insurance companies were involved to the extent of \$352,240 in the Toronto fire.

Mr. Archibald Wood, private banker, of Millbrook, is dead. He was senior member of the firm of Wood and Kells.

The annual meeting of the shareholders of the Sovereign Bank of Canada will be held in Toronto on the 14th inst.

The Metropolitan Bank will occupy the quarters in the Canada Life Building, Toronto, which have been vacated by the Bank of Nova Scotia.

The Bank of Nova Scotia are now occupying their handsome new building on King street west, Toronto. The rotunda and facade of this building have been greatly admired.

The Nova Scotia Fire Insurance Company, a non-tariff company, which was organized in Halifax about a year ago, held its annual meeting recently. The report of the directors was considered very satisfactory. The number of policies issued during the year was 900, and the premiums received amounted to \$21,113.97. The profits for the year amounted to \$13,602.42. The rates of this company are something like 10 per cent. less than those of the tariff companies.

THE BEST STOCK

TEES
DESKS!!!

THE LOWEST PRICES

TEES & CO.

300 St. James St.,

MONTREAL

WESTERN ASSURANCE COMPANY.

Incorporated
1851
**FIRE
AND
MARINE**

Head Office Capital - \$2,000,000.00
 Toronto, Assets, over - - 3,546,000.00
 Ont. Annual Income - 3,678,000.00

HON. GEO. A. COX, President.

J. J. KENNY, Vice-President and Man. Director.

C. C. FOSTER, Secretary.

Money

CAN BE SAVED BY MEANS
OF AN ENDOWMENT POLICY.

**YOU CAN ONLY SECURE
SUCH A POLICY WHILE YOU
ARE IN GOOD HEALTH.**

Pamphlets and Full Particulars regarding the
New Accumulation Endowment Policy
sent on application.

Confederation Life ASSOCIATION.

W. H. BEATTY, PRESIDENT.

W. C. MACDONALD,
ACTUARY.J. K. MACDONALD,
MANAGING DIRECTOR.

HEAD OFFICE, - TORONTO, CANADA.

MANUFACTURERS AND MERCHANTS.

It may be necessary for your staff to have fidelity bonds. We act as surety on such. We are known the world over.

Write to us for terms and particulars.

The London Guarantee & Accident Co., Limited,

D. W. ALEXANDER, General Manager for Canada,
Canada Life Building, . . . TORONTO.

BRITISH AMERICA ASSURANCE COMP'Y

FIRE AND MARINE.

Incorporated 1833

CASH CAPITAL, \$1,000,000.00.
 TOTAL ASSETS, \$2,024,096.02.
 LOSSES PAID SINCE ORGANIZATION, \$23,886,005.32.

HEAD OFFICE, - BRITISH AMERICA BUILDING,
Cor. Front and Scott Sts., Toronto.

HON. GEO. A. COX, President. J. J. KENNY, Vice-President
 P. H. SIMS, Secretary. and Managing Director

THE CANADIAN BANK OF COMMERCE.

Paid-up Capital, - - - \$8,700,000
 Rest, - - - \$3,000,000

HON. GEO. A. COX, President. B. E. WALKER, General Manager.

HEAD OFFICE: TORONTO, CANADA.

This Bank, with 109 branches, covering all the principal cities of Canada and the Pacific coast of the United States, and its own offices in London, Eng., and New York, is able to offer to those engaged in mercantile business of any kind unexcelled facilities for any legitimate banking business.

LIST OF BRANCHES: BRITISH COLUMBIA:

Atlin	Greenwood	Nanaimo	Vancouver
Cranbrook	Kamloops	Nelson	" East End
Fernie	Ladysmith	New Westminster	Victoria

MANITOBA AND NORTHWEST TERRITORIES:

Calgary	Elgin	Moose Jaw	Regina
Carman	Elkhorn	Moosomin	Swan River
Dauphin	Gilbert Plains	Neepawa	Treherne
Dawson	Grandview	Ponoka	White Horse
Edmonton	Innisfail	Portage la Prairie	Winnipeg
	Medicine Hat	Red Deer	" North

ONTARIO AND QUEBEC:

Ayr	Dundas	Ottawa	Stratford
Barrie	Dunnville	Paris	Strathroy
Belleville	Fort Frances	Parkhill	Toronto, 8 offices
Berlin	Galt	Peterboro	Toronto Junction
Blenheim	Goderich	Port Perry	Walkerton
Brantford	Guelph	St Catharines	Walkerville
Cayuga	Hamilton	Sarnia	Waterloo
Chatham	London	Sault Ste Marie	Warton
Collingwood	Montreal	Seaforth	Windsor
Dresden	Orangeville	Simcoe	Woodstock

MARITIME PROVINCES:

Amherst	Canning	New Glasgow	Springhill
Antigonish	Halifax	Parrsboro	Sydney
Barrington	Lockeport	Sackville	Truro
Bridgewater	Lunenburg	St John	Windsor
	Middleton	Shelburne	

IN THE UNITED STATES:

New York	Portland, Ore	San Francisco.
Seattle, Wash.	Skagway, Alaska	

LONDON, ENGLAND, OFFICE: 60 LOMBARD ST., E.C.

A general banking business transacted. Foreign exchange bought and sold

THE METROPOLITAN BANK.

CAPITAL PAID UP, - - \$1,000,000.
 RESERVE FUND, - - 1,000,000.

HEAD OFFICE, - TORONTO.

R. H. WARDEN, L.D., PRESIDENT. W. D. ROSS, GENERAL MANAGER.

BRANCHES:

Brigden	Petrolia	In Toronto--
Brockville	Pictou	cor. College and Bathurst Sts.
Brussels	Streetsville	Dundas and Arthur Sts.
East Toronto	Sutton West	Queen and McCaul Sts.
Milton	Wellington	7 and 9 King St. E.

GENERAL
BANKING
BUSINESS

SAVINGS
DEPARTMENT
AT ALL BRANCHES

Roofing Felt Factory
Harbor St.,
Montreal.

Paper Manufacturers

Paper Mills,
Joliette,
Quebec.

Building Papers

Ready Roofing

Pitch and Roofing Cement

Black Diamond Brand



TARRED FELT.

Brown and Manilla Wrapping

Hanging and Print,

Colored Papers

ALEX. McARTHUR & CO., Office 82 McGill St., Montreal
LIMITED.

CURRENT MARKET QUOTATIONS.

June 3, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

TIN PLATES.

Charcoal Plates—Bright. Per box.

M.L.S., equal to Bradley—

I.C. usual sizes..... \$6 50

I.X. "..... 8 00

I.X.X. "..... 9 50

Famous, equal to Bradley—

I.C. "..... 6 75

I.X. "..... 8 25

I.X.X. "..... 9 75

Raven and Vulture Grades—

I.C. usual sizes..... 4 25

I.X. "..... 5 00

I.X.X. "..... 5 75

I.X.X.X. "..... 6 50

"Dominion Crown Best"—Double

Coated, Tissue. Per box.

I.C. "..... 5 50

I.X. "..... 6 50

X.X. "..... 7 50

Allaway's Best—Standard Quality.

I.C. "..... 4 50

I.X. "..... 5 50

I.X.X. "..... 6 50

Coke Plates—Bright.

Bessemer Steel—

I.C., usual size, 14x20..... 3 35

I.C., special sizes, base..... 3 60

20x28..... 7 10

Charcoal Plates—Terne

Dean or J. G. Grade—

I.C., 20x28, 112 sheets..... 7 50

I.X., Terne Tin..... 10 50

Charcoal Tin Boiler Plates.

Cookley Grade—

X.X., 14x36, 50 sheet bxs. }..... 7 00

" 14x60, "..... 7 00

" 14x65, "..... 7 00

Tinned Sheets.

72x30 up to 24 gauge..... 7 25

26 "..... 7 75

IRON AND STEEL.

Common bar, per 100 lb..... 1 90

Refrined "..... 2 20

Horseshoe Iron..... 2 25

Hoop steel, 1 1/2 to 3-in. base..... 2 75

Sleigh shoe steel, "..... 2 10

Tire steel..... 2 30

T. Firth & Co.'s tool steel, per lb 0 12 1/2

B. K. Morton & Co..... 0 13

"Alpha" Air Hardening tool steel..... 0 70

"M" Self-Hardening..... 0 75

"T" Standard..... 0 14

Jessop's high speed steel..... 0 60

"standard tool steel..... 0 14

"crucible sheet steel..... 0 14

"Chas. Leonard's tool..... 0 08

Crucible Steel Co..... 0 09

"Black Diamond..... 0 10

"Silver steel..... 0 13

"Special..... 0 17

"Rex high speed steel..... 0 65

"Self Hardening..... 0 45

Sanderson's Crucible Tool..... 0 03

"Superior..... 0 12

"Extra Anil..... 0 15

"Self Hardening..... 0 45

"Rex high speed..... 0 65

Jonas & Colver's tool steel..... 0 10

"Air Hardening..... 0 70

Drill steel, per lb..... 0 08

BABBIT METAL.			
"Tandem," A.....	per lb.	0 27	
" B.....	"	0 21	
" C.....	"	0 11 1/2	
Frictionless Metal.....	"	0 23	

Syracuse Smelting Works:			
Aluminum, genuine.....		0 45	
Government.....		0 44	
Tough.....		0 40	
Hard.....		0 40	
Dynamo.....		0 30	
Special.....		0 25	
Harmony.....		0 22	
Car Box.....		0 20	
Extra.....		0 15	

The Canada Metal Co.:			
Imperial, genuine.....		0 40	
Metallic.....		0 30	
Hercules.....		0 20	
Star.....		0 15	
No. 1.....		0 12	
No. 2.....		0 10	
No. 3.....		0 06	
No. 4.....		0 05	

Geo. Langwell & Son.			
No. 1.....		0 08	
No. 2.....		0 07	
No. 3.....		0 05 1/2	
Extra.....		0 09 1/2	

BLACK SHEETS.

	Montreal	Toronto
10 and 16 gauge.....	2 25	2 50
18 gauge.....	2 30	2 50
20 ".....	2 30	2 50
22 to 24 gauge.....	2 35	2 70
26 ".....	2 40	2 80
28 ".....	2 40	2 90

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary..... 2 60

All bright..... 3 50

Galvanized Canada Plates—

Ordinary..... Dom. Crown.

18x24x52..... 4 25 4 35

60 "..... 4 50 4 60

20x28x80..... 8 50 8 70

" 94 "..... 9 00 9 20

GALVANIZED SHEETS.

Queen's

Fleur-de-Lia, Gordon Crown Comet Bell Head

16 gauge..... 3 65 3 75 3 75 3 75

18 to 24 gauge..... 3 75 3 75 3 75 3 75

26 "..... 4 00 4 00 3 90 4 00

28 "..... 4 25 4 25 4 05 4 25

American brands, \$4.00 for 28 gauge.

Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00

" 5-16 "..... 5 60 4 45

" 7-16 "..... 3 85 3 70

" 9-16 "..... 3 55 3 45

" "..... 3 45 3 35

" "..... 3 35 3 25

Halter, kennel and post chains, 40 to 40 and 5 per cent.

Cow ties..... 40 p.c.

Tie out chains..... 65 p.c.

Stall fixtures..... 35 p.c.

Trace chain..... 45 p.c.

Jack chain, iron, single and double, discount 35 p.c.

Jack chain, brass, single and double, discount 40 p.c.

COPPER.

Ingot..... Per 100 lb.

Casting, car lots..... 13 75

Bars.....

Cut lengths, round, 1/2 to 1 in. 21 00 23 00

" round and square, 1 to 2 inches..... 21 00 23 00

Sheet.			
Plain, 16 oz., 14x48 and 14x60.....		20 00	
Plain, 14 oz., ".....		21 00	
Tinned copper sheet.....		24 00	
Planished ".....		32 00	

Braziers' (in sheets).			
4x6 ft., 25 to 30 lb. each, per lb.....		0 22	
" 35 to 45 ".....		0 21	
" 50-lb. and above ".....		0 20	

BOILER AND T.K. PITTS.			
Plain tinned, per lb.....		0 28	
Spun, per lb.....		0 32	

BRASS.			
Rod and Sheet, 14 to 30 gauge, 15 per cent.		0 23	
Sheets, hard-rolled, 2x4.....		0 23 1/2	

ZINC SPELTER.			
Foreign, per 100 lb.....	6 00	6 25	
Domestic ".....			

ZINC SHEET.			
5-cwt. casks.....	6 15	6 50	
Part casks.....	6 50	7 00	

LEAD.			
Imported Pig, per 100 lb.....	3 20	3 30	
Bar, per lb.....		0 05	
Sheets, 2 1/2 lb. sq. ft., by roll.....		0 06 1/2	

NOTE.—Cut sheets 1c. per lb., extra. Pipe, by the roll, usual weights per yard, lists at 7c. per lb. and 35 p.c. f.i.s. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe 8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's..... per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00 per 100 lb.; buck, seal and ball, \$7.50. Discount, 17 1/2 p.c. Prices are f.o.b. Toronto, Hamilton, Montreal, St. John and Halifax.

Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.

Zinc..... 6 00

Copper, discount 20 per cent. off revised list.

BATHS.

Standard Enameled.....

5 1/2-ft. rolled rim, 1st quality..... 21 60

5 1/2 " 2nd "..... 17 85

CLOSETS.

Fittings..... Net.

Plain Simplex Syphon Jet..... 1 00

Emb..... 9 00

BEAMS CHANNELS ANGLES PLATES

1,500 TONS FOR SALE

All of this material in lengths from 40 to 60 feet.
We can ship promptly, and should be pleased to receive your order.
Prices and stock lists on application.

STEEL FRAME BUILDINGS and ROOF TRUSSES.

Also Steel Bridges for Railways and Highways.

THE HAMILTON BRIDGE WORKS COMPANY

LIMITED

Long Distance Telephone, Hamilton 630.

HAMILTON, CANADA.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French "	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt.	Less than this
quantity 10 extra	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 33 p.c.	2 00
Burnt sienna	9 00
" umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fine proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl.	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Pure	Per 100 lb.	4 75
No. 1		4 50
No. 2		3 25
No. 3		3 87½
No. 4		3 50
Munro's Select Flake White		4 75
Elephant and Decorators' Pure		4 75
Monarch		5 00
Decorators' Pure		4 75
Essex Genuine		4 25
Sterling Pure		5 00
Island City Pure		5 00
Ramsay's Pure Lead		4 75
Ramsay's Exterior		4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs.	4 75	
No. 1, 560 lb. casks, per cwt	4 00	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 50
Pure, kegs.	4 75
No. 1, casks	4 25
No. 1, kegs.	4 50

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon.	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co's pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
"British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
" Thistle	1 00
" Outside, bbls	0 55
Island City House Paint	1 25
" Floor	1 20
Sterling House Paint	1 20
" Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose	1 85
25-lb. tins.	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
" rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
" No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
" orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
" black japan	1 10	1 20
" No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granitine floor finish, per gal	2 75	
Maple Leaf coach enamels, size 1, \$1.20; size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish, assorted case, from 1 gal., \$2.50.		

GLUE.		
Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine		
Strip	0 18	0 20
Coopers	0 19	0 20
Huttner		
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 40 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 5 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 10 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads, per lb.

Best thick brown or grey felt wads, in ½-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.

Discount 20 per cent.

ANVILS.		
Wright's, 80-lb. and over	0 10½	
Hay Budden, 80-lb. and over	0 09½	
Brook's, 80-lb. and over	0 11½	

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

AXES.		
Chopping Axes		
Single bit, per doz	7 00	10 00
Double bit, " "	10 00	18 00
Bench Axes, 40 per cent.		
Broad Axes, 25 per cent.		
Hunters' Axes	5 50	6 00
Boys' Axes	6 25	7 00
Splitting Axes	7 00	12 00
Handled Axes		10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys', handled	5 75
" hunters	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE

Ordinary, per gross	6 00	7 00
Best quality	10 00	12 00

BELLS.

Hand.

Brass, 60 per cent.	
Nickel, 55 per cent.	

Cow.

American make, discount 63½ per cent.

Canadian, discount 45 and 50 per cent.

Door.

Gongs, Sargent's	5 50	8 00
" Peterboro', discount 50 and 10 per cent. off new list.		

Farm.

American, each	1 25	3 00
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House.

American, per lb.	0 35	0 40
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BELLOWS.

Hand, per doz	3 35	4 75
Moulders, per doz	7 50	10 00
Blacksmiths', discount 40 per cent.		

BELTING.

Extra, 60 per cent.

Standard, 60 and 10 per cent.

No. 1, not wider than 6 in., 60, 10 and 10 per cent.

Agricultural, not wider than 4 in., 75 per cent.

BITS.

Auger.

Gilmour's, discount 60 per cent.

Rockford, discount 50 and 10 per cent.

Jennings' Gen., net list.

Car.

Gilmour's, 47½ per cent.

Expansive.

Clark's, 40 per cent.

Gimlet.

Clark's, per doz 0 65 | 0 90 || Diamond, Shell, per doz | 1 00 | 1 50 |
| Nail and Spike, per gross | 2 25 | 5 20 |

BLIND AND RED STAPLES.

All sizes, per lb. 0 07½ | 0 12 |

BOLTS AND NUTS

Carriage Bolts, common (\$1 list)

" " 3-16 and ½ 60 | || " " 5-16 and ¾ | 55 | and 5 |
" " 7-16 and up	55	
" " full sq. (\$2.40 list)	60	
" " Norway Iron (\$3 list)	60	
Machine Bolts, all sizes, ¾ and less	60	
Machine Bolts, 7-16 and up	55	and 5
Plough Bolts	55	and 5
Blank Bolts	55	and 5
Blot Ends	55	and 5
Sleigh Shoe Bolts	70	
Coach Screws, cone point	70	
Nuts, square, all sizes, ¼, per lb. off.		
Nuts, hexagon, all sizes, ¼, per lb. off.		
Stove Rods per lb., ½ to 60.		

BOOT CALKS.

Small and medium, ball per M. | 4 25 || Small heel | | 4 50 |

BRIGHT WIRE GOODS.

Discount 62½ per cent.

BUTCHERS' CLEAVERS.

German	per doz.	6 00	9 00
American	"	12 00	18 00

BUTCHER KNIVES.

Bailey's	per doz.	0 60	6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb. 1 85 |

Ready roofing, 2-ply, not under 45 lb. |

per roll 0 90 |

Ready roofing, 3-ply, not under 65 lb. |

per roll 1 15 |

Carpet Felt per ton | 45 00 |

Heavy Straw Sheathing per ton | 35 00 |

Dry Sheathing per roll, 400 sq. ft. | 0 40 |

Tar " | 400 " |

Dry Fibre " | 400 " |

Tarred Fibre " | 400 " |

O. K. & I. X. L. " | 400 " |

Resin-sized " | 400 " |

Oiled Sheathing " | 600 " |

Oiled " | 400 " |

Roof Coating, in barrels per gal. | 0 17 |

Roof small packages | 0 25 |

Refined Tar per barrel | 5 00 |

Coal Tar per gal. | 4 00 |

Coal Tar, less than barrels per gal. | 0 15 |

Roofing Pitch per 100 lb. | 1 10 |

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.90 for 2-inch.

BUTTS.

Wrought Brass, net revised list.

Cast Iron.

Loose Pin, discount 60 per cent |

Wrought Steel.

Fast Joint, discount 65, 10 and 2½ per cent.

Loose Pin, discount 65, 10 and 2½ per cent.

Berlin Bronzed, discount 70, 70 and 5 percent

Gen. B. ronzed per pair | 0 40 | 0 65 |

CARPET STRETCHERS.

American	per doz.	1 00	1 50
Bullard's	"		6 50

CASTORS.

Bed, new list, discount 50 to 57½ per cent.

Plate, discount 52½ to 57½ per cent.

CATTLE LEADERS.

Nos. 32 and 33	per gross	7 50	8 50
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CHALK.

Carpenters' Colored	per gross	0 45	0 75
White lump	per cwt.	0 60	0 65
Red	"	0 05	0 06
Crayon	per gross	0 14	0 18

CHISELS.

Socket, Framing and Firmer.

Broad's, discount 60 and 10 per cent.

Warnock's, discount 50 and 10 per cent.

P. S. & W. Extra, discount 60 and 10 per cent.

FOODS—STOCK.

Colonial Stock Foods, 50c. packages, |

" " " 25c. pkgs., " " per doz | \$4 00 |

" " " 10c. " " " " | 2 75</ |

Remington Raises Records

The new C.E.O. Trap Gun established the five-man squad world's records—1454-1500 clay targets, 97 per cent., in three consecutive days.

Do you care for record-breaking scores? The new Remington C.E.O. gun, retailing at \$75.00, is a revelation to those who have been used to old-style guns.

ILLUSTRATED CATALOGUE FREE

REMINGTON ARMS CO., ILION, N.Y.

Agency: 315 Broadway, New York City.

Depot: 86-88 First St., San Francisco, Cal.

PLANE IRONS.		SAP SPOUTS.		STAPLES.		ENAMELLED WARE.	
English	per doz. 2 00 5 00	Bronzed iron with hooks	per 1,000 7 50	Plain	3 00	White, Princess, Turquoise, Blue and White	discount 50 per cent.
PLIERS AND NIPPERS.		"Eureka" tinned steel, hooks ..	8 00	Coopers'	2 80	Diamond, Famous, Premier, discount 50 and	10 per cent.
Button's genuine, per doz. pairs, discount		SAWS.		Poultry netting staples, discount 40 per cent.		Granite or Pearl, Imperial, Crescent, discount	50, 10 and 10 per cent.
37½ to 40 per cent.		Hand, Disston's, discount 12½ per cent		STOCKS AND DIES.		Premier steel ware, 40 per cent.	
Button's imitation	per doz. 5 00 9 00	Crosscut, Disston's	per foot 0 35 0 55	American discount 25 per cent.		"Star" decorated steel and decorated white,	25 per cent.
German	" 0 60 60	S. & D., discount 35 per cent. on Nos. 2 and 3.		STONE.		WIRE.	
PRESSED SPIKES.		Hack, complete	each 0 75 2 75	Washita	per lb. 0 28 0 60	No. 0-9 gauge	\$2 50
Discount 20 per cent.		" frame only	each 0 50 1 25	Hindostan	" 0 06 0 07	10 "	6c. extra.
PULLEYS.		SASH WEIGHTS.		Labrador slip	" 0 09 0 09	11 "	12c. "
Hothouse	per doz. 0 55 1 00	Sectional	per 100 lb. 2 00 2 25	" Axle	" 0 13 0 13	12 "	20c. "
Axle	" 0 22 0 33	Solid	" 1 50 1 75	Turkey	" 0 15 0 15	13 "	30c. "
Screw	" 0 27 1 00	SASH CORD.		Arkansas	" 0 10 1 50	14 "	40c. "
Awning	" 0 35 2 50	Per lb.	0 28 0 30	Water-of-Ayr	" 0 10 1 50	15 "	55c. "
PUMPS.		SAW SETS.		Scythe	per gross 3 50 5 00	16 "	70c. "
Canadian cistern	1 80 3 60	Lincoln and Whiting	4 75	Grind, 2-in., 40 to 200 lb., per ton	25 00	Smooth Steel Wire.	
Canadian pitcher spout	1 40 2 10	Hand Sets. Perfect	4 00	" under 40 lb.	28 00	10 "	6c. extra.
PUNCHES.		X-Cut Sets,	7 50	" under 2 in. thick,	29 00	11 "	12c. "
Saddler's	per doz. 1 00 1 85	SCALES.		STOVEPIPES.		12 "	20c. "
Conductor's	" 3 00 15 00	Gurney Standard, 40 per cent.		5 and 6 inch, per 100 lengths	7 00	13 "	30c. "
Finners, solid	per set 0 72	Gurney Champion, 50 per cent.		7 inch	7 50	14 "	40c. "
" hollow	per inch 1 00	Burrow, Stewart & Milne—		ENAMELINE STOVE POLISH.		15 "	55c. "
RAKES.		Imperial Standard, discount 40 per cent.		No. 4, 3 doz. in case, net cash	4 80	16 "	70c. "
Wood	per doz. net 1 20 up	Weight Beams, discount 35 per cent.		No. 6, 3 doz. in case	8 40	WIRE.	
RAZORS.		Champion Scales, discount 50 per cent.		TACKS, BRADS, ETC.		10 "	6c. extra.
Elliot's	4 00 18 00	Fairbanks standard, discount 35 per cent.		Carpet tacks, blued	80 and 15	11 "	12c. "
Geo. Butler's & Co.'s	4 00 18 00	" Dominion, discount 55 per cent.		" tinned	80 and 20	12 "	20c. "
Bokers	7 50 11 00	" Richelieu, discount 55 per cent.		" (in kegs)	40	13 "	30c. "
" King Cutter	12 50 15 00	Warren's new Standard, discount 40 per cent.		Cut tacks, blued, in dozens only	60	14 "	40c. "
Wade & Butcher's	3 60 10 00	" Champion, discount 50 per cent.		" weights	60	15 "	55c. "
Theile & Quack's	7 00 12 00	Weightbeams, discount 35 per cent.		Swedes cut tacks, blued and tinned—	80 and 10	16 "	70c. "
Carbo Magnetic	15 00	SCREW DRIVERS.		In bulk	80 and 10	Smooth Steel Wire.	
Griffon Barber's Favorite	10 75	Sargent's	per doz. 0 65 1 00	In dozens	75	10 "	6c. extra.
Griffon No. 65	13 00	SCREEN DOORS.		Swedes, upholsterers', bulk	85, 12½ and 12½	11 "	12c. "
Griffon Safety Razors	13 50	Common doors, 2 or 3 panel, walnut		" brush, blued and tinned	70	12 "	20c. "
Griffon Strapping Machines	13 50	stained, 4-in. style	per doz. 6 50	Swedes, gimp, blued, tinned and	75 and 12½	13 "	30c. "
Lewis Bros' "Klean Cutter"	8 50 10 50	Common doors, 2 or 3 panel, yellow and		Japanned	75 and 12½	14 "	40c. "
REGISTERS.		green stained, 4-in. style	per doz. 6 75	Zinc tacks	35	15 "	55c. "
Discount 40 per cent.		Common doors, 2 or 3 panel, in natural		Copper tacks	50	16 "	70c. "
RIVETS AND BURS.		colors, oil finish	per doz. 8 75	Copper nails	52½	Smooth Steel Wire.	
Iron Rivets, black and tinned, discount 60 and		3-in. style 20c. per dozen less.		Trunk nails, black	65 and 5	10 "	6c. extra.
10 per cent.		SCREWS.		Trunk nails, tinned	65 and 10	11 "	12c. "
Iron Burs, discount 55 per cent.		Wood, F. H., bright and steel, discount 87½		Clout nails, blued	65 and 5	12 "	20c. "
Extras on Iron Rivets in 1-lb. cartons, ½c.		per cent.		Chair nails	35	13 "	30c. "
per lb.		Wood, R. H., bright, dis. 82½ per cent.		Patent brads	40	14 "	40c. "
Extras on Iron Rivets in ½-lb cartons, 1c.		" F. H., brass, dis. 80 per cent.		Fine finishing	40	15 "	55c. "
per lb.		" R. H., dis. 75 per cent.		Lining tacks, in papers	10	16 "	70c. "
Copper Rivets, with usual proportion burs, 45		" F. H., bronze, dis. 75 per cent.		" solid heads, in bulk	75	Smooth Steel Wire.	
per cent. discount. Cartons, 1c. per lb.		" R. H., dis. 70 per cent.		" in bulk	15	10 "	6c. extra.
extra, net.		Drive Screws, dis. 87½ per cent.		Saddle nails, in papers	10	11 "	12c. "
Copper Burs only, discount 30 and 10 per cent.		Bench, wood	per doz. 3 25 4 00	" in bulk	15	12 "	20c. "
Extras on Tinned or Coppered Rivets, ½-lb.		" iron	4 25 5 00	Tufting buttons, 22 line, in doz-	60	13 "	30c. "
cartons, 1c. per lb.		Set, case hardened, dis. 60 per cent.		ens only	60	14 "	40c. "
RIVET SETS.		Square Cap, dis. 50 and 5 per cent.		Zinc glaziers' points	5	15 "	55c. "
Canadian, discount 35 to 37½ per cent.		Hexagon Cap, dis. 45 per cent.		Double pointed tacks, papers	90 and 10	16 "	70c. "
ROPE, ETC.		SCYTHES.		Clinch and duck rivets	45	Smooth Steel Wire.	
Sisal	0 10½	Per doz. net	6 00 9 00	TAPE LINES.		10 "	6c. extra.
Pure Manila	0 12	SCYTHE SNATHS.		English, ass skin	2 75 5 00	11 "	12c. "
"British" Manila	0 12	Canadian, discount 40 per cent.		English, Patent Leather	5 50 9 75	12 "	20c. "
Cotton, 3-16 inch and larger	0 20½ 0 22	SHEARS.		Chesterman's	each 0 90 2 85	13 "	30c. "
" 5-32 inch	0 25 0 27	Bailey Cutlery Co., full nickeled, discon-		" steel	each 0 80 8 00	14 "	40c. "
" 1 inch	0 25 0 28	and 2½ per cent.		TINNERS' SNIPS.		15 "	55c. "
Russia Deep Sea	0 15	Bailey Cutlery, Japan Handles, discount 67½		Per doz.	3 00 15 00	16 "	70c. "
Jute	0 08	Seymour's, discount 50 and 10 per cent.		THERMOMETERS.		17 "	85c. "
Lath Yarn, single	0 10½	Canadian, discount 45 per cent.		Tin case and dairy, discount 75 to 75 and 10		18 "	95c. "
" double	0 11	SHOVELS AND SPADES.		per cent.		19 "	1 05
Sisal bed cord, 45 feet	per doz. 0 65	Cast iron, 16 x 24	0 85	TRAPS (steel.)		20 "	1 15
" 60 feet	" 0 80	" 18 x 30	1 00	Game, Newhouse, discount 25 per cent.		21 "	1 25
" 72 feet	" 0 95	" 18 x 36	1 40	Game, H. & N., P. S. & W., 65 per cent.		22 "	1 35
RULES.		SINKS.		Game, steel, 72½, 75 per cent.		23 "	1 45
Boxwood, discount 55 per cent.		SNAPS.		TROWELS.		24 "	1 55
Ivory, discount 37½ to 40 per cent.		Harness, German, discount 25 per cent.		Disston's, discount 10 per cent.		25 "	1 65
SAD IRONS.		Lock, Andrews'	4 50 11 50	German	per doz. 4 75 6 00	26 "	1 75
Mrs. Potts, No. 55, polished	per set 0 80	SOLDERING IRONS.		S. & D., discount 35 per cent.		27 "	1 85
" No. 50, nickle-plated,	" 0 90	1½-lb.	per lb. 0 37	TWINES.		28 "	1 95
Common, plain	4 50	2-lb. or over	0 34	Bag, Russian	per lb. 0 27	29 "	2 05
" plated	5 50	SQUARES.		Wrapping, cotton, 3-ply	0 24	30 "	2 15
SAND AND EMERY PAPER.		Iron, No. 493	per doz. 2 40 2 55	" 4-ply	0 27	31 "	2 25
B. & A. sand, discount, 40 and 5 per cent.		" No. 494	3 25 3 40	Mattress	per lb. 0 33 0 45	32 "	2 35
Emery, discount 40 per cent.		Steel, discount 60 to 60 and 5 per cent.		Staging	0 27 0 35	33 "	2 45
Garnet (Rurton's) 5 to 10 per cent. advance		Try and Bevel, discount 50 to 52½ per cent.		VISES.		34 "	2 55
on list		Plain, discount 75 and 12½ per cent. off re-		Wright's	0 13½	35 "	2 65
		vised list.		Brook's	0 12½	36 "	2 75
		Retinned, discount 75 per cent. off revised list.		Pipe Vise, Hinge, No. 1	3 50	37 "	2 85
				" No. 2	5 50	38 "	2 95
				Saw Vise	5 50 9 00	39 "	3 05
				WROUGHT IRON WASHERS.		40 "	3 15
				Blacksmiths' (discount) 60 per cent.		41 "	3 25
				parallel (discount) 45 per cent.		42 "	3 35

Alley Improved Chilled Shot Co.....	9	Joda, P. D., & Co.....	47	Leslie, A. C., & Co.....	35	Paterson Mfg. Co.....	64
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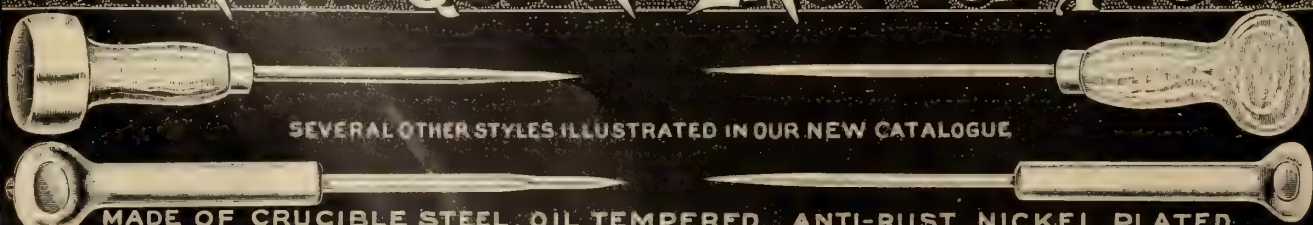
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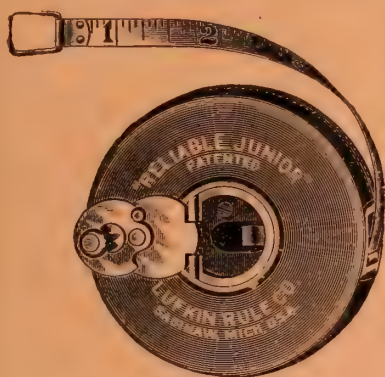
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VOL. XVI.

MONTREAL AND TORONTO, JUNE 11, 1904.

NO. 24

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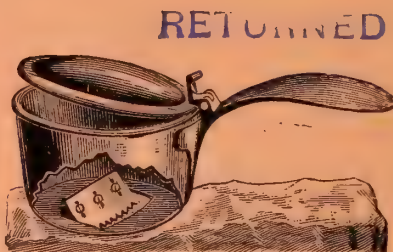


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ICE SHREDDER



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ENTERPRISE
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ICE SHREDDER

Get our Prices ICE CREAM FREEZERS

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THE DAISY CHURN

With Steel or Iron Frame



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ICE TONGS



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THE LEADER CHURN

With Steel or Iron Frame

WRITE FOR TRADE PRICES.

RICE LEWIS & SON

LIMITED

TORONTO.

HORSE CLIPPER
MAKERS



TO HIS MAJESTY
THE KING.

The BARTON GILLETTE HORSE
CLIPPING and SHEEP SHEARING CO.,
103 NEW OXFORD ST., LONDON, W.C. Limited
SOMETHING ENTIRELY NEW IN HAND CLIPPERS.

THE
CORONATION.

Fitted with our
Patent Ball Race
which has enabled
us to secure all
prizes and medals
awarded for Horse
Clipping and
Sheep Shearing
Machinery.

USED EXCLUSIVELY
IN THE
ROYAL STABLES.



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The plates are
considerably wid-
er than those sup-
plied with any
other Clipper, thus
enabling the user
to do more work.
PATENT ANTI-FRIC-
TIONAL LEVERS
and BEST FINISH.

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AWARDED 2 FIRST PRIZES ROYAL SHOW OF ENGLAND BEATING ALL
COMERS, AND 12 MEDALS AT VARIOUS AGRICULTURAL SHOWS.

Send for Illustrated Catalogue and Terms. Agents wanted everywhere.

THE BARTON GILLETTE POWER CLIPPERS USED EX-
CLUSIVELY IN THE STABLES OF :—H.M. THE KING, H.R.H. THE
PRINCE OF WALES, H.R.H. THE DUKE OF CONNAUGHT, AND ALL
THE LEADING NOBILITY AND GENTRY.

THE CANADIAN RUBBER CO. of Montreal.

MANUFACTURERS OF

Rubber Belting,
Hose, Packing,
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We make a specialty of

HORSE SHOE PADS

the best in the market.

Write for Prices and Circulars.

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BRANCHES—TORONTO, WINNIPEG and VANCOUVER

Other Tools are very
good Tools, but

“YANKEE TOOLS” ARE BETTER



No. 15. “Yankee” Ratchet Screw Driver, with Finger Turn on Blade.



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No. 41. “Yankee” Automatic Drill, Eight Drill Points in Handle.



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No. 60.
Pocket Magazine
Screw Driver.

Our “YANKEE” Tool Book
tells all about them. Mailed
free on application.

Manufacturers also of

LIGHTNING,
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BLIZZARD
Ice Cream Freezers.

Toy Freezers,
Ice Shaves and
Ice Chippers.

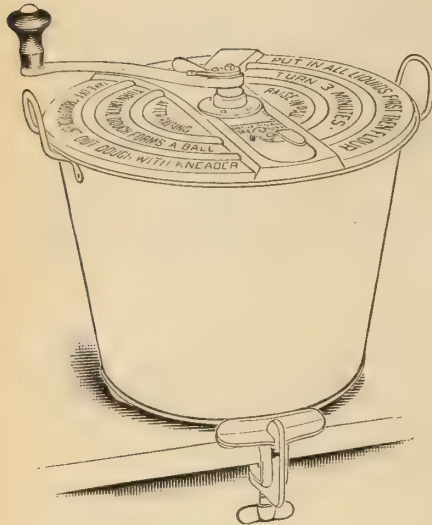
Fluting Machines,
Hand Fluters.

Sold by Leading Jobbers
in Canada.

NORTH BROS. MFG. CO.,

Philadelphia, Pa., U.S.A.

THOS. BIRKETT & SON CO.,
LIMITED
Wholesale Hardware Merchants,
OTTAWA, ONT.



In introducing

**The
Universal
Bread
Maker**

we do so with confidence,
knowing it will do all that
is said of it.

To mix and knead
bread in **3** minutes may
seem extravagant, but it
is a fact

Here is a

**MIXER, KNEADER and RAISER
ALL IN ONE.**

The old and disagreeable task of Bread-making is done away with.

We shall be pleased to send booklets for your customers, and give prompt
attention to your sample order.



DELIGHTED

Bridget will be delighted
with the Russwin Food
Cutter. It makes her work
easier, pleasanter—gives
widest scope to her skill,
and does most in least time.
Just try it. For sale every-
where. Made by

RUSSELL & ERWIN MFG. CO.
NEW BRITAIN, CONN.

—FOR SALE BY—

The KENNEDY HARDWARE CO., Limited
49 Colborne St., TORONTO, ONT.

We have now in stock a full line of the following :

**GALVANIZED SHEETS,
BLACK SHEETS,
TINNED SHEETS,
IMITATION RUSSIAN IRON,
IRON PIPE,**

**TINPLATES,
CANADA PLATES,
ZINC SHEETS,
COPPER SHEETS,
BRASS SHEETS,**

IRON and STEEL HOOPS.

**METALS, ANTIMONY, COPPER, TIN, LEAD, ZINC,
PROMPT SHIPMENT. PRICES RIGHT.**

M. & L. Samuel, Benjamin & Co.

503 Temple Building

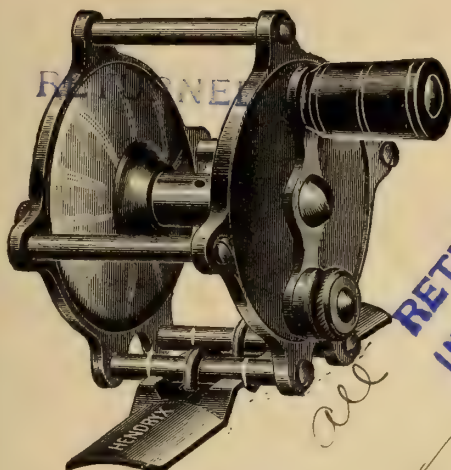
- TORONTO.

English House—16 Philpot Lane, LONDON, ENGLAND.

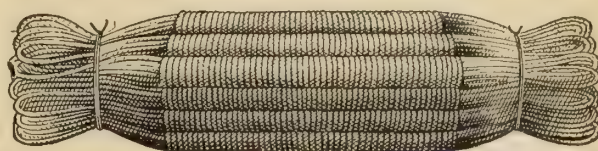


A Talk with Retailers

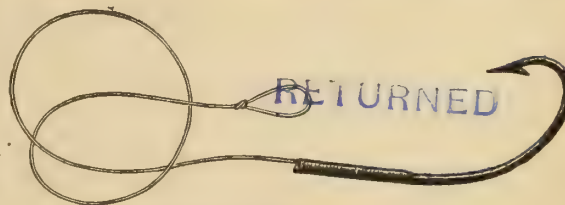
Who controls the trade in your town?—You or the other fellow, and why?
 Aren't prices the same?
 Doesn't he carry the same lines as you?
 Then who has the greater assortment?
 Do you realize that *variety* comes before low prices and heavy stocks?
 Wouldn't it be better for you to have ½-dozen wrenches each of four varieties,
 than 1-dozen each of only two varieties?—Answer.
 The same remark applies to the lines we illustrate.
 Our mail order system is for you to have the *variety* and to keep it *complete*.



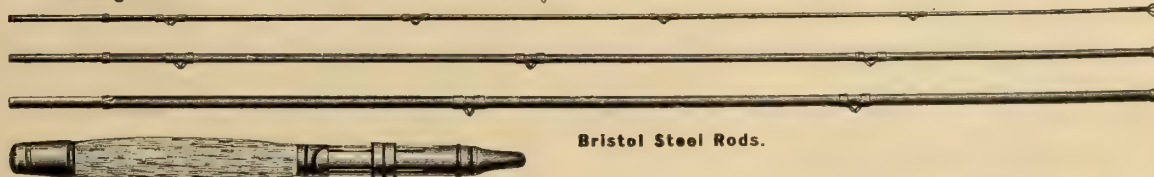
Fishing Reels.



Silk and Cotton Lines.



Single and Double Gut Hooks.



Bristol Steel Rods.



Willow Leaf Trolling Baits.

RODS, SILK LINES, FLOATS, HOOKS, LANDING NETS, TROUT FLIES, REELS, COTTON LINES, TROLLING SPOONS, SINKERS, GAFFS,

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LOW

LEWIS BROS. & CO.

SHIP
QUICK

IMPORTERS AND DISTRIBUTORS.

Address all Correspondence to

TORONTO,
87 York St.OTTAWA,
54 Queen St.VANCOUVER,
141 Water St.

MONTREAL

Cordage

Of every description.

Net Mountings,

Sand Line,

Unoiled Cordage,

Marline,

Extra Long Lengths,

Ratline,

Shingle Yarn.

Core Rope,

Oil Well Cables,

Russian Packing,

Deepest Sea Lines,

Anchor Line,

Good Transmission Rope,

Engine Packing.

Clothes Lines,

Only Best Material Used.

Log Line

Twine.

Dangerous to use Inferior Cordage.

Mail

Orders

Now

To us and

Recieve

Exceptional

Attention.

Low-priced goods are not always
the cheapest.

WHEN YOU ORDER HORSE NAILS

You will study your own interest by stating that you require the "C" Brand.

We find that there are some dealers, who unless they receive specific instructions for our Brand, will substitute other brands on which they make a larger profit, by selling them at the price for "C" Brand Nails. This method is unfair to the purchaser and to ourselves. If the purchaser of Horse Nails pays the same price for any other Brand of Nails that he would for the "C" Brand, he is paying too much; as no other Brand of Nails made in Canada is sold by the makers at the same price as ours. They are the best judges of the value of their own goods, and as judged by their lower prices, they do not value their Nails to be equal to the "C" Brand—and they are right.

You cannot make a Nail equal to the "C" Brand, except in the same way that the "C" Brand is made, and out of the same material. There are no works in Canada that use the same material as we do in the manufacture of our nails. It is a special quality, made especially for us in Sweden, and represents the highest grade obtainable of Swedish Charcoal Siemens-Martin Steel Nail Rods. This is the best material known or used by any manufacturer in the world, for the purpose of making Horse Nails.

The processes by which we make our nails are also used by no other works in Canada; the result is, that we have a nail that is made from the best material and will stand the hardest usage required. By reason of its superior design and hardened needle point, it will drive into the hardest hoof and clinch perfectly; and will hold the shoes longer than any other. This fact being admitted, and is proved by the experience of thousands of Farriers from the Atlantic to the Pacific who can testify to this, it follows, that being the best, they are the cheapest to buy.

You can buy any other Brand of nail from the wholesale dealer at from 25c. to 50c. a box less than the "C" Brand. This bulks very large to some purchasers, but if an intelligent Farrier would consider that upon the quality of the nail the reputation and permanence of his work depends, he will when the facts are fairly presented use the best. Consider also that for every 25c. a box less, on the average size and quantity used in shoeing a horse, it only reduces the cost of the nails used $\frac{1}{3}$ of a cent! There is no one so poor but that he can afford the best nails in view of this small difference in cost.

We would respectfully urge every purchaser, who is not already a buyer of the "C" Brand, to give them a thorough trial, and we feel satisfied that the results will prove all that we claim for them.

We have been making Horse Nails in Canada since 1865, and our experience of 39 years is embodied in every box of nails bearing the "C" Brand and our name.

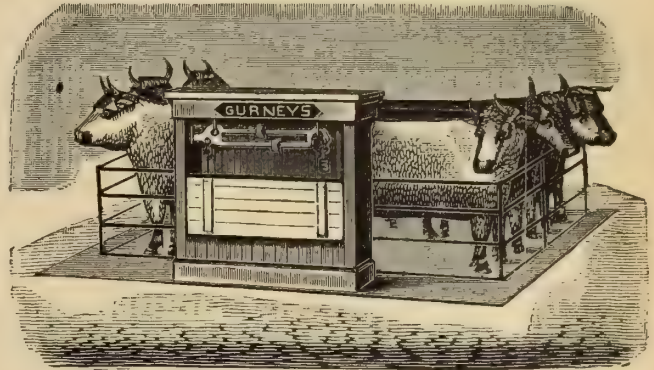
The preference for our Brand and make is respectfully requested.

**CANADA HORSE NAIL COMPANY,
MONTREAL.**

THE GURNEY STANDARD SCALES

Absolutely Accurate and Reliable. The Best of Material and Workmanship. Recognized throughout Canada as

"THE STANDARD"



We make scales of every description. Established 1856.
Send for catalogue and printed matter.

The Gurney Scale Co., Hamilton, Ont.

Eastern Warehouse:

Western Warehouse:

The Gurney-Massey Co., Limited The Gurney Stove and Range Co.
Montreal, Que. Winnipeg, Man. Limited,



GILLETT'S LYE

—IS GOOD FOR—

Photographers'
and **Machinists'** uses
Foundrymen, Bolt
and **Nut Makers.**

A large market for Gillett's Lye is thus provided.

**E. W. GILLETT COMPANY LIMITED
TORONTO**



GRANT-03-

DEPARTMENT OF ADVERTISING SERVICE

None so Blind As Those Who Won't See.

HARDWARE AND METAL can prove of valuable assistance to the selling end of any business which seeks trade among the hardwaremen and general storekeepers of Canada.

We advance many plain, indisputable arguments to this effect.

And still there are some folks who can't see it.

Some who can't see how it's going to pay them.

And won't even invest a few dollars to find out.

Very few folks like this, but we would like to convince even them.

If we only could, we'd get a good deal of satisfaction out of it—and we know they would, too.

Don't you think they're blind to their own interests?

Here's a paper that finds a welcome in every worth-while hardware store from Halifax to Vancouver once every week—so can't you see that an announcement of any interest must surely command some attention?

The advertising columns of HARDWARE AND METAL provide about the best way we know of keeping in close touch with all the hardwaremen of Canada all the time.

You can see value in a paper like this—

Can't you?

Hardware and Metal

232 McGill St.,
MONTREAL.

10 Front St. E.,
TORONTO.

WINDOW AND CURTAIN FIXTURES



Our line comprises all requisites, Pins, Hooks, Rings, Pole Ends, Brackets and Sockets. We would like an opportunity of quoting you on these goods. Keep us in mind and when you want regular or special lines, let us know.

JONES & BARCLAY, Bath Row, BIRMINGHAM, ENG.

GLAZIERS' DIAMONDS



Our diamonds were first on the market and still remain first with up-to-date improvements. We claim for them **Superiority over All Others** in **Quality and Workmanship**.

Glaziers' Diamonds of every description, for all purposes, supplied.

Established 1815

CANADIAN AGENT

GODFREY S. PELTON
338 St. Paul St., - Montreal

A. Shaw & Son

52 Rahere St., E.C., London

STANLEY RULE & LEVEL CO., NEW BRITAIN, CONN., U.S.A.

IMPROVED CARPENTERS'
TOOLS

SOLD BY ALL HARDWARE
DEALERS.



You certainly could not read and digest our brief, but brim-full of business, little history of the Hamilton "Take-down" Rifle No. 19, and escape about such a thought as this: "Well, if that \$2.50 22 gun actually is as handsome and all-round good as these people claim, there is a big field for it right here in my trade."

Let us mail you that little "Hamilton" history and see what will happen. Shall we do so?

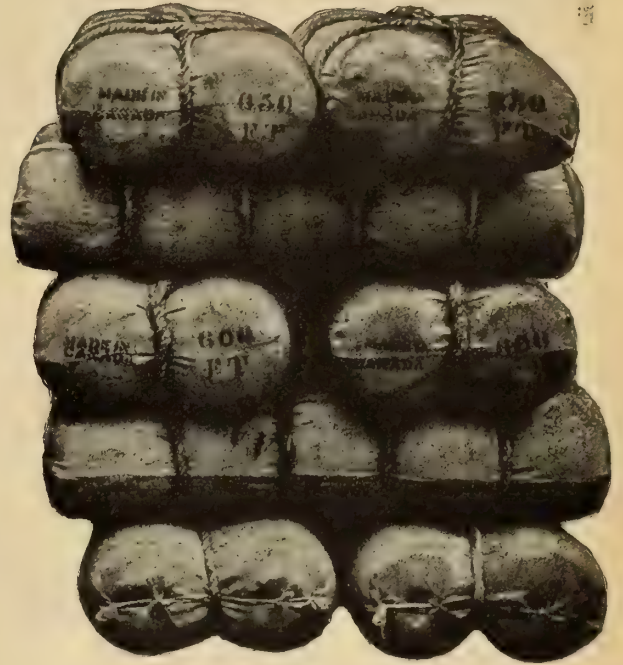
The HAMILTON RIFLE CO.,
Box No. 71. PLYMOUTH, MICH.

C.H. HENKELS PHILA.

CANADIAN CORDAGE

& MFG. Co., Limited.

BINDER TWINE.



"ROYAL" MANILA, 650 ft. to the pound.
"ROYAL" MANILA, 600 ft. to the pound.
"ROYAL" MANILA, 550 ft. to the pound.
"ROYAL" MANILA, 500 ft. to the pound.
STANDARD, - 500 ft. to the pound.
SISAL, - 500 ft. to the pound.

Our "ROYAL" Brand of Binder Twine is manufactured of the finest raw material that can be obtained, and with the utmost care. For length and strength we have no competitors. Our twine is manufactured with the latest machinery, and dealers desiring to have exclusive agencies should apply at once.

Write, Wire or 'Phone.

CANADIAN CORDAGE & MFG. CO., Limited
Peterborough, Ont.

SHOT.

In ordering, please specify **The Abbey Improved Chilled Shot Co., Ltd., Newcastle-on-Tyne.**

N.B. We also make Hard and Soft Shot but strongly recommend Improved Chilled Shot for penetration.

N.B.—The only Company in Great Britain devoting its whole time to Shot making

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and ELECTRO PLATE.**

Ask for our Catalogue and Quotations.



Dundas Axe Works

DUNDAS, CANADA.

Write for Prices

P. BERTRAM, - Manager.

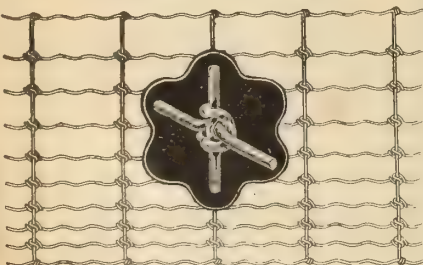
STEEL STAMPS

For Manufacturers of
MACHINERY and METALWARE
All our work is guaranteed to be satisfactory.

THE PARSONS-IRONS CO.
58 Adelaide St. W., - **TORONTO.**

Your Customers

the farmers are looking for a fence, strong, serviceable and durable at a reasonable cost. You can supply it to them in the

IDEAL

It is strictly up-to-date and the best value to be had in wire fencing to-day.

A GOOD SELLER

We have a style for every purpose in either heavy or light fencing. Write for catalogue showing fencing and gates.

Coiled-Spring Wire

unexcelled in quality, shipped promptly

THE

McGregor-Banwell Fence Co.

Limited
Walkerville, Ont.

MERRICK, ANDERSON & CO., Winnipeg
Sole Agents for Manitoba and N. W. T.



This design a guarantee of quality

DO YOU PUBLISH A CATALOGUE?

IF YOU DO YOU SHOULD USE "CANADIAN-MADE" PAPER. All grades, from the highest "Glossy Finish" to the rough "Antique" and bulky "Featherweight."

Your printer
can supply it.

CANADA PAPER CO.

Toronto

LIMITED

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GALVANIZED FENCE HOOK

FOR FASTENING WOODEN PICKET ON WIRE FENCE.



WIRE NAILS, COILED SPRING, BARB and PLAIN FENCE WIRE, OILED and ANNEALED, CLOTHES LINE WIRE, STAPLES, etc.

THE WESTERN WIRE & NAIL CO., Limited.

 **LONDON, ONT**



"Little Shaver"

Cutest Thing in the Kitchen

Shaves chocolate so thin that it dissolves without stirring. Slices Potatoes, Radishes, Cucumbers, Onions, Apples and all the smaller fruits and vegetables Made of black walnut. Knife is fine tempered steel.

MADE ONLY BY

Canadian Agents:

E. H. GRENFELL & CO.
LONDON, ONT.

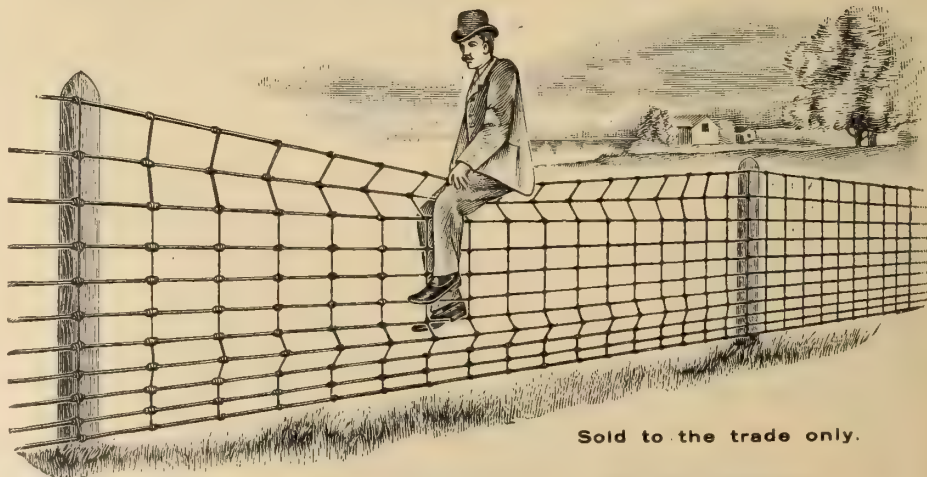
J. M. MAST MFG. CO., Lititz, Pa.

SPECIAL DROP FORGED SPRINGS

THE WALLACE BARNES CO.,
BRISTOL, CONN.

DILLON FENCING

THE HINGE IS COMPLETE, AND WORKS WITH THE UTMOST FREEDOM.



Sold to the trade only.

CAVERHILL, LEARMONT & CO., Agents
at Montreal and Winnipeg.

Manufactured and sold by
OWEN SOUND WIRE FENCE CO., Limited
Owen Sound, Ont.



ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows the
NIAGARA WIRE LINK
"Dominion" (or
"Short") Type.

Also made in "CLOSED RING," "OPEN RING," and "THREE CHAIN" TYPES.

Oneida Community Cow Ties can be had of all the leading jobbers. We invite correspondence where any difficulty is experienced in obtaining our goods.

Address Write for New Catalogue.

ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.

STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.

WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
and
TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO. LIMITED
MONTREAL and TORONTO

American Steel & Wire Co.

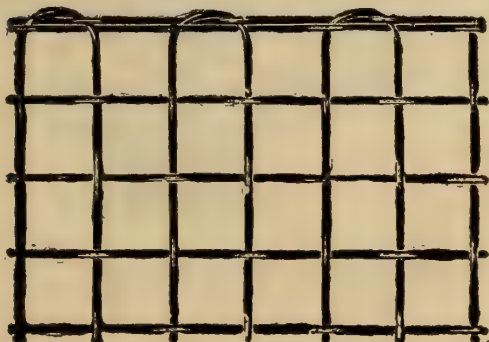
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Empire Building

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BARBED WIRE CALVANIZED PLAIN WIRE
PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.



WIRE CLOTH

Special Regalvanized Cloth for Apple and Fruit Drying.

Stock widths, 24, 30 and 36 in.
Other widths and meshes made to order.

Also 1/2 in. Galvanized Netting.

Stock widths, 24, 30 and 36 in.
Stock lengths, 25 and 50 yards.

Also Wire Cloth and Netting, for all purposes.

THE B. GREENING WIRE CO., Limited

Hamilton, Ont.

Montreal, Que.



TWO MAN OR PONY LAWN MOWER.

ALL SIZES IN STOCK.**PROMPT SHIPMENT.**

SIZES—25 in., 30 in., 35 in., 40 in. Made with 4 blades and 6 blades. Grass Catcher and Lawn Shoes also supplied.

SEND FOR CATALOGUE "B" AND FOR PRICE LIST.

THE TAYLOR-FORBES CO., LimitedMontreal Branch:
9 De Bresoles St.**GUELPH, CANADA.**

The largest manufacturers of Hardware in Canada.

Kemp's Cold Blast Lanterns

The success which our Lantern has achieved is largely demonstrated by the points of superiority that it possesses.

A Combination Lift and Hinge Lantern.

It is easily adjusted.

Its burning qualities are unexcelled—

WILL NOT BLOW OUT.

WILL NOT SMOKE.

WILL NOT LEAK.

WILL NOT BREAK GLOBES.

If your customers desire such a lantern, sell them ours.

**THEY DO NOT COST MORE THAN OTHER MAKES****KEMP MANUFACTURING CO., TORONTO, CAN.**

A Business Man's Impressions of Western Canada.

An Interview with Wm. Vallance, of Wood, Vallance & Co., Hamilton.

FEW Canadian business men keep in closer touch with the developments in Manitoba, Northwest Territories and British Columbia than Wm.

Vallance, of Wood, Vallance & Co., wholesale hardware dealers, Hamilton.

Mr. Vallance returned on Saturday from a trip to the Pacific coast, after visiting many of the principal trade centres en route. In an interview with Hardware and Metal he expressed continued confidence that the West should make, in the years to come, greater progress than has been the case in any of the years which have gone.

"The prosperity and progress extends right to the Coast," said Mr. Vallance. "In Victoria, a city considered to be somewhat slow and conservative, there is every indication of growth and business activity. New buildings are going up; the merchants are busy; in every way the city looks busier than on my last visit. This city is steadily progressing on a sound, substantial basis.

BUSY VANCOUVER.

"Vancouver is wonderful. Buildings are going up in every direction. Growth is manifest in every way. In fact, the city seems to be developing at a rate that an eastern man cannot see the cause of. It is quite evident, however, that, though the reasons for such abounding prosperity in Vancouver are not apparent on the surface, they exist, for the oldest and most conservative houses there are going

ahead with extensions with every confidence.

"The lumber trade, as your Vancouver correspondent has stated, is depressed. But outside of that line, business throughout the Province of British Columbia is improving. The mining industry seems to be freed from the booms and wildcat schemes of former days, and the developments in the Kootenay

for that country, and is bound to go ahead. The other towns in the district are in good shape. There are not so many people on the street, consequently not the same apparent activity. But there is more real industry and more actual business.

"The Okanagan Valley is rapidly becoming a fruit country that will compare favorably with either Ontario or California. Apples, cherries, plums, pears; in fact, all the fruits that grow in Ontario can be produced successfully in the Okanagan. They have a superb market in the Northwest prairies.

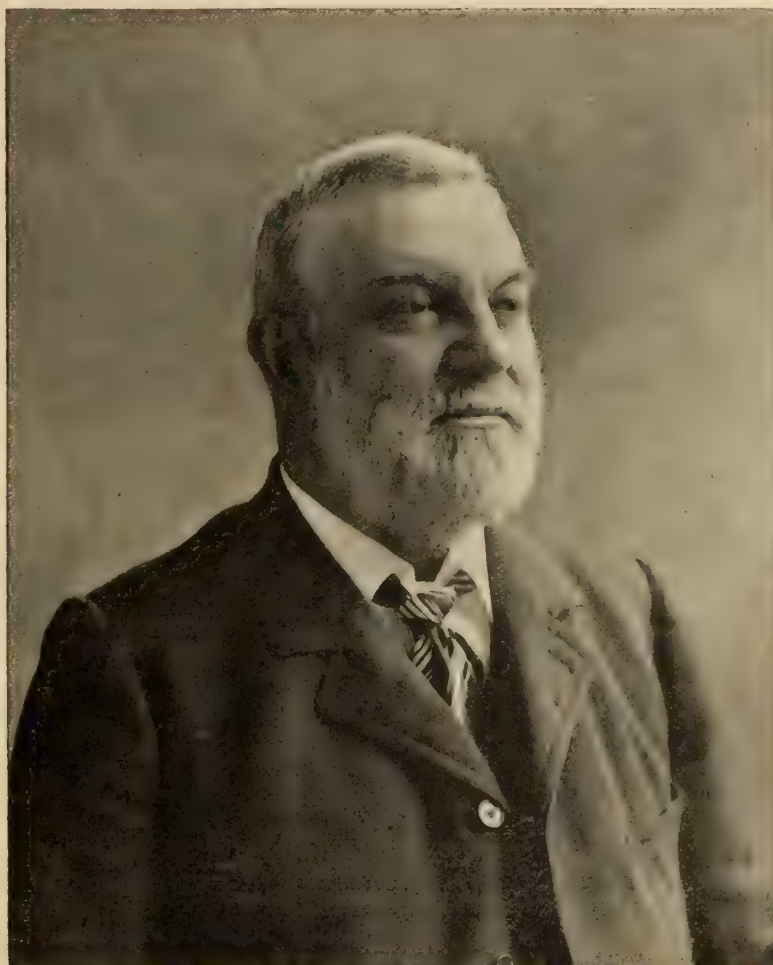
"I did not stop along the route between Winnipeg and British Columbia.

WINNIPEG'S GROWTH.

"Winnipeg is simply marvelous, the warehouses, bank buildings, and office buildings, which have been put up in recent years, or now being erected, would be a credit to any city in the world. The C.P.R. have under way their new subway at Main street, are ready to break ground for their big hotel, and have about completed their new shops, which are three or four times the size

of the old ones. This activity, together with the erection of hundreds of houses in all parts of the city, gives to Winnipeg an air of progress and prosperity which cannot fail to arouse interest, if not the enthusiasm, of every visitor. These developments are, moreover, the strongest proof which can be given of the confidence which has inspired

"Nelson appears to be in good shape. There are no empty houses there, and business is substantial. This city is now undoubtedly the distributing centre



MR. WM. VALLANCE.

business men in all parts of Canada in the future of the city. The large wholesale and bank buildings, it must be remembered, are being put up by capitalists who are investing the necessary money to ensure a permanent and extensive connection in the West.

COMMERCIAL PROGRESS.

"The developments to date have largely been of a commercial nature. Its geographical position and railway facilities have combined to make Winnipeg the distributing point for Manitoba and the Northwest Territories, right out to the Rocky Mountains, so as that country grows the city will expand. Every one in Canada knows how the prairie country has grown in recent years, and how immigration is pouring in this year. There is every reason why wholesale and manufacturing firms who have not had a connection in Winnipeg should be securing one now.

FACTORIES WILL FOLLOW.

"Industrial developments are bound to follow the commercial. Some factories are now being erected there, and others are bound to follow, especially as the raw material in many lines is close enough at hand to make the production of the finished goods as economical as their production elsewhere, together with freight charges, would entail.

THE GRAND TRUNK PACIFIC.

"The construction of the G. T. P. will open up another country, equal to the best of Manitoba, and better than the average along the line of the railway now opening through the country. The West is undoubtedly a country of great possibilities."

AMERICAN COMPETITION.

"Do you find the competition of American companies," inquired Hardware and Metal, "more serious than in former years?"

"It is probably so in some lines," answered Mr. Vallance, "but one must take into consideration that competition is always keener on a falling market. As all your readers know, while prices are not materially lower at present, there is not the same buoyancy which was the case last year. The keenness of competition is not the result of American invasion alone, as Canadian houses are themselves looking for business with more vim and determination than ever, and, apart altogether from the rivalry of American manufacturers, are keeping each other busy to hold their grip on the trade in the West.

In some lines it must be remembered, however, the Canadian manufacturers were not in a position last year to supply all the demand, with the result that the goods were bought on the United States market. This has given some American manufacturers a connection which in a time of depression in their own market, like the present, they will not be willing to relinquish without a keen struggle. In British Columbia, both at the Coast and in the Kootenay, the competition of Seattle is a factor which the Canadian houses have to recognize in their dealings."

THE WEST FOR THE RETAILER.

"Is the West a promising field for retail merchants?" asked Hardware and Metal?"

"Not in the same way that it is for the man who goes out to develop the country and take the rewards that are offered by the fertility of the soil and the cheapness of agricultural land. In the western towns, as in the eastern centres, there is much rivalry on the part of retailers for business, and unless one knows his line thoroughly and has sufficient capital, the western towns do not, in my opinion, offer materially greater inducements to a retail merchant than are offered in the older provinces of the Dominion. The man who is to win best results in the West is the one who goes out with determination to work hard with his hands, as well as with his brain."

ORDERS FOR RAILS FROM CANADA.

American railmakers are expecting heavy rail orders from Canada for next year's delivery, says the Wall Street Journal. Predictions of early fall bookings for many thousands of tons of standard shapes for Canadian roads are made by members of the rail pool who have exceptional opportunities of knowing in what quarters rails are needed. The Canadian Northern and the Canadian Pacific both will need thousands of tons of new steel rails long before the new Canadian tariff of \$7 per ton on American rails can become operative. United States railmakers know that the Canadian roads will get all the rails they can from England, but in all competitive business they are confident that they can underbid the English makers. Only a short time ago the Pennsylvania Steel Co. demonstrated its ability to furnish rails to Canadian roads at about \$8 per ton less than rails are sold to consumers this side of the border.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Niles-Bement-Pond Co.

THE handsome new catalogue of the Niles-Bement-Pond Co., of New York, entitled, "Machine Tools," has just been received through their Canadian representatives, the Fairbanks Co., and is one of the finest ever issued. It is a large volume, containing over 700 pages and, taking it all through, it is a work of art. The paper used is the best, and the illustrations are superb, bringing out the details in an excellent manner. The first pages are devoted to illustrations of the various works of the company, showing their great extent, followed by pictures of the different medals and diplomas received for exhibits, which are very numerous. The body of the work is made up of illustrations and descriptions of the machine tools manufactured, which include hydraulic machinery, boring machines, drilling machines, steam hammers, gear cutting machinery, lathes of all kinds, milling machines, planing machines, slotting machines, traveling cranes, and many others, covering the whole range of machine tools.

A Clothes Brush Free.

The Sayer Electric Company, Montreal, are sending to the hardware trade absolutely free of charge a serviceable and handsome clothes brush, which would be welcomed in any store. Of course, this is done for advertising purposes, the name of the firm appearing in raised letters on the back of the brush. It is quite evident that the Sayer Electric Company desire this brush to be a lasting advertisement, for they have selected a brush that will last

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

a long-time... This is an article constantly required in a hardware store, and a postcard will bring one, the Sayer Electric Co. paying the postage. Any reader who mentions this paper may secure one on request. Write before the supply is exhausted.

Jobbing List.

John Millen & Son, Montreal and Toronto, have issued a new jobbing list of sporting goods and sporting sundries. Every hardware merchant who has not already received one should write this firm for a copy, mentioning Hardware and Metal.

New Jersey Foundry & Machine Co.

Hardware and Metal has received from the New Jersey Foundry & Machine Co., 9, 11, 13 and 15 Murray street, New York, a circular describing their Diamond Expansion Bolt and Shield. Some interesting illustrations are given, and the reader is furnished with figures giving dimensions of long and short standard shields, etc. The list prices are quoted. Any reader of Hardware and Metal may have a copy by writing this firm.

Safety Stop Valve.

McLaughlin Bros., Philadelphia, are sending out catalogue A, illustrating and describing the McLaughlin Safety Stop Valve, which is a quick acting stop valve for boilers and main steam lines. Readers of Hardware and Metal may secure a copy of this catalogue upon application.

Detroit Pump Co.

Hardware and Metal has received from the Detroit Pump Co., Detroit, a copy of the catalogue recently issued by this firm, describing and illustrating the Blackmer Rotary Pump, which may be used for fire engines, village water works, reservoirs, mines, quarries, wells, etc. Great claims are made for this pump on account of its simplicity, economy and efficiency. Those interested in liquid pumps should secure one of these catalogues.

Marsh Steam Pumps.

The American Steam Pump Co., Battle Creek, Mich., are sending out illustrated catalogue No. 12, in which is presented to the trade and steam users in general a complete list of the pumps manufactured by this firm, together with the specifications. The lists and detail tables are in convenient form for reference and comparison. It

Put Sherwin-Williams Varnish Stain on Your Shelves

and you'll add a quick-selling and profitable specialty to your paint stock.

Varnish Stain is specially in demand during house-cleaning days. It stains and varnishes chairs, tables, cabinets, woodwork, etc., by one application. It correctly imitates the natural woods. It's very easy to put on—does good work always.

Varnish Stain is well advertised. It is brought before the consumer in all our advertising. It is one of the leaders in The S-W. Full Line.

Write us today for prices and full particulars.



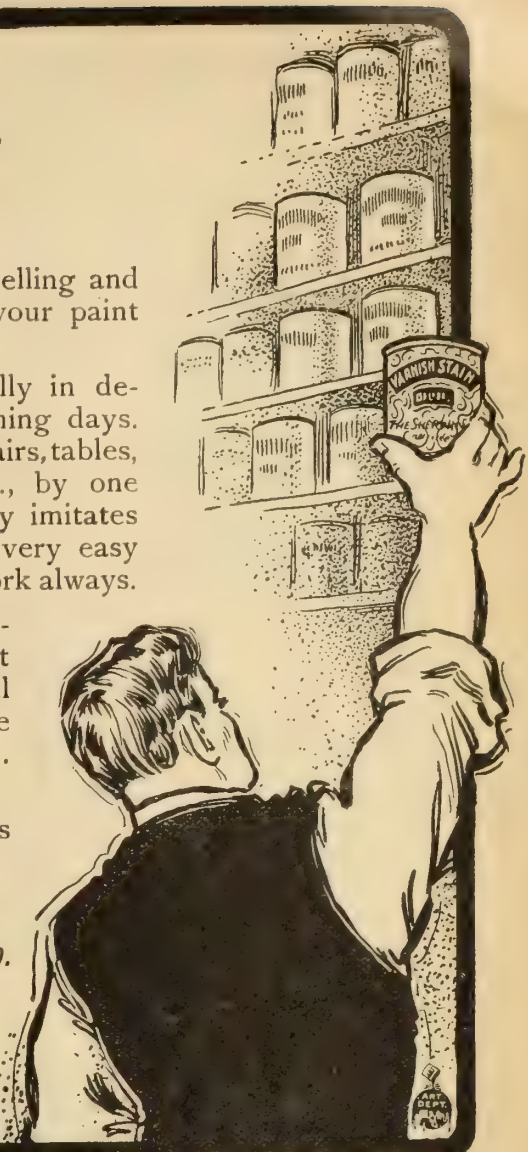
THE SHERWIN-WILLIAMS CO.

PAINT AND VARNISH MAKERS

CANADIAN HEADQUARTERS
AND PLANT

21 St. Antoine St., Montreal.

1219



would be a most useful catalogue for prospective buyers of steam pumps to have, and also would be a valuable catalogue of reference for all users of steam pumps. Readers of Hardware and Metal may secure a copy upon application.

Atlas Car & Manufacturing Co.

The Atlas Car & Manufacturing Co., Cleveland, O., are presenting to their patrons catalogue No. 1018, illustrating and briefly describing various styles of mine and ore cars, and also a complete line of dump cars adapted for work of all kinds. Readers of Hardware and Metal may secure a copy of this catalogue upon application to the Atlas Car & Manufacturing Co.

NO REORGANIZATION OF U. S. STEEL.

A large stockholder of the United States Steel Corporation, who is thoroughly

familiar with the industry, says; "I notice a reference every little while in the financial press as to a possible reorganization of the United States Steel Corporation. I will go on record as saying that there will never be a reorganization of the United States Steel Corporation so long as Andrew Carnegie and Henry Clay Frick live. The latter would never permit of a reorganization which might make possible the property reverting to Mr. Carnegie. The second mortgage bond issue was financed for the very purpose of preventing such a reorganization, and these are nicknamed in Pittsburg the 'Frick buffer bonds'. They cannot be foreclosed for two years after default, and if there should ever come a depression in the steel trade which would endanger the fixed charges of the company, and I don't believe there ever will, H. C. Frick and his Standard Oil associates would put their hands in their pockets and make good the interest rather than permit the property to fall into Carnegie's lap. I know whereof I speak".

Business Changes

ONTARIO.

THE stock of the estate of M. T. Cathcart, general merchant, Barwick, has been sold to M. C. Drew.

G. C. Haines, carriage maker, Bowmanville, is dead.

J. A. Denning, general merchant, Kerwood, has sold out to R. Parker.

J. Denning, general merchant, Kerwood, has sold out to C. Johnston.

A meeting of the creditors of D. Gillies, general merchant, Elmvale, was called for June 7.

The plant and machinery of the W. J. Bradley Machinery Co., Toronto, are advertised for sale.

A meeting of the creditors of the Acetylene Lighting Co., London, is to be held on June 14.

QUEBEC.

W. Wilson, general merchant, St. Jude, is dead.

F. Garceau, general merchant, Rigaud, has assigned to Lamarche & Benoit.

J. Tremblay, general merchant, Tremblay, has effected a compromise.

Bell Bros., general merchants, Kasubazua, have sold out to A. Pritchard.

E. Laliberte, general merchant, Lotbiniere, has assigned to V. E. Paradis.

The assets of A. D'Anjou, general merchant, Riviere Ouelle, have been sold.

P. Morin, general merchant, Ste. Thuriibe, has advertised his business for sale.

The assignment of J. Fisher, general merchant, Jonquieres, has been demanded.

J. L. Seguin, general merchant, St. Simon, is offering to compromise at 65c on the dollar.

J. Burns & Co., manufacturers of ranges, Montreal, have had their plant and stock damaged by fire.

Fire has destroyed the premises of O. Richard, general merchant, St. Valere De Bulstrode; loss partially covered by insurance.

MANITOBA AND N.W.T.

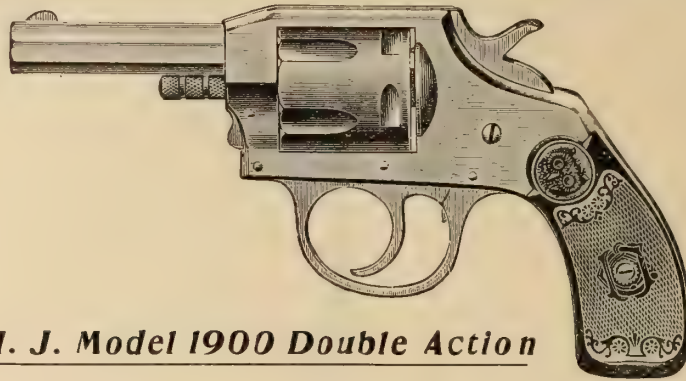
J. Morrison, general merchant, Grand View, has sold out.

J. Dreidger, general merchant, Blumencfelt, is giving up business.

H. M. Aldous, general merchant, Lorie, has removed to Lemberg.

M. Ateah, general merchant, Winnipeg Beach, has sold out to M. Tiron.

THE RECOGNIZED 4th OF JULY REVOLVER



I. J. Model 1900 Double Action

The best Revolver for the money in the world. Order of your jobber, and insist upon getting it. Do not allow of substitution. Made by

Iver Johnson's Arms & Cycle Works

MAKERS OF THE FAMOUS

IVER JOHNSON REVOLVERS, GUNS and BICYCLES

NEW YORK OFFICE.
No 99 Chambers Street.

ARMORIES & GENERAL OFFICES,
Fitchburg, Mass., U. S. A.

A. Stinson, hardware merchant, Manor, has sold out to J. L. Williamson.

Smith & Wilson, general merchants, DeWinton, have sold out to R. Paling.

W. K. Cross, dealer in bicycles, Moose Jaw, has been succeeded by Moody & Cross.

J. W. Heric & Co., general merchants, Wetaskiwin, have sold out to G. F. Carniel.

W. G. Fulford & Co., general merchants, Mather, have sold out to Gordon & Hurssell.

J. G. Struthers & Co., general merchants, Cartwright, have removed to Goose Lake.

F. G. Casey, general merchant, Tantallon, has admitted A. S. MacDonald to partnership.

Application has been made to change the name of the Dominion Steam Heating Co., of Winnipeg, to the John Plaxton Co.

BRITISH COLUMBIA.

Carruthers & Cousens, painters, Chilwack, have dissolved partnership.

H. Tanaka & Son, bicycle dealers, Cumberland, have advertised that they are giving up business.

H. Byers, hardware merchant, Sandon, is discontinuing business in that place.

IRON WORKS PLANT FOR SALE.

The equipment of the insolvent Northrop Iron Works, at Valleyfield, Que., the manufacturers for Canada of the Draper looms, has been purchased by the Fairbanks Co., who will dispose of same at auction, at their Toronto warehouse, on July 2. The list includes over one hundred tools, such as moulding and foundry equipment, pattern-shop equipment, air compressor, etc., all of the highest grade American make. Copy of the list of tools to be sold will be issued by the Fairbanks Co. next week, and the tools will be sold to the highest bidder in order to get rid of them quickly. This should prove a good opportunity to get first-class tools at a low figure.

The Mexican Light, Heat & Power Co., Montreal, recently placed an order in the United States for copper cable for transmission, which is said to be the largest single order for single transmission cable ever placed. The order calls for 1,500 miles of cable, equal in carrying capacity to 3-0 B. & S. gauge, and weighing 4,200,000 pounds. The cable is to be used on the Nicaxia-Mexico power transmission line, now under construction, and it will be supported on steel towers in spans of 500 feet. The cable was designed by W. G. Clark of Seattle, E. E., Seattle, Wash.

June 11, 1904

HARDWARE AND METAL

H. S. HOWLAND, SONS & CO.

WHOLESALE
ONLY.

Telephone,
Office, Park 1584.

TEMPORARY WAREHOUSE:

212-218 Cowan Avenue.

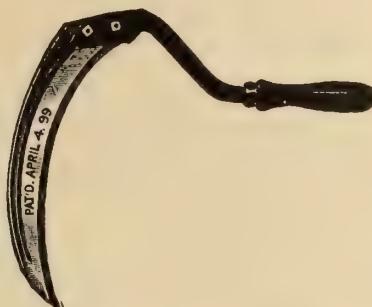
SAMPLE ROOM and ORDER OFFICE—21 Scott Street.

LIMITED
ONLY
WHOLESALE.

Telephone,
Warehouse, Park 1585.



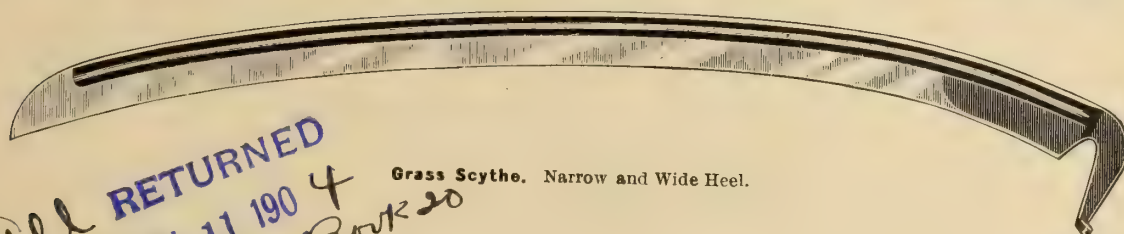
"Frezo" Freezers



"Little Giant" Grass Hook



"Peerless Iceland" Freezer



Grass Scythe. Narrow and Wide Heel.

*All RETURNED
JUN 11 1904
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LAWN MOWERS



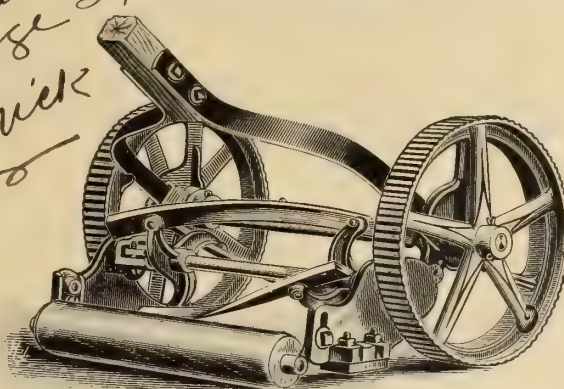
No. 3—Drive Ring



No. 2—Drive Ring



No. 1—Drive Ring, 2 Hole



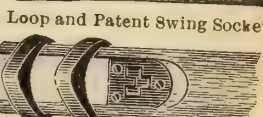
"Daisy," 8 in. Low Solid Wheel, 3 Knives.
"Star," 9 in. Open " 3 "
"Woodyatt," 10½ in. " 4 "
Tin Grass Catchers
for Woodyatt Mower only.



Snaths



Loop and Solid Plate



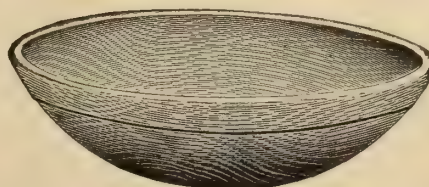
Loop and Patent Swing Socket



Double Ring Bush



"Favorite" Churns



Maple Wood Bowls



"Leader" Churns

FOR FULLER PARTICULARS SEE OUR CATALOGUE.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

Our prices are right.

GRAHAM NAILS ARE THE BEST.

Factory: Dufferin Street, Toronto, Ont.

We Ship Promptly.

New and Second-Hand Machinery,
Engines, Boilers, Belting, Pulleys,
Motors, Etc.

Any readers of this paper wanting
any of the above goods may have
an advertisement inserted free in
HARDWARE AND METAL, the
machinery weekly newspaper of
Canada, by enclosing this notice.
Address

HARDWARE and METAL
Montreal, Toronto, Winnipeg.

The Hamilton Steel & Iron Company

LIMITED

HAMILTON, - CANADA.

OPEN HEARTH

STEEL CASTINGS
OF ANY WEIGHT.

NOT IN THE COMBINE

Ask for Prices of
Shovels, Spades, Scoops, Etc.
WE HAVE A LARGE STOCK.

CANADA HARDWARE CO., Limited, Montreal

SPECIAL NOTICE.

WE NOW HAVE IN STOCK A COMPLETE
LINE OF

INDIA OIL STONES

AND CAN MAKE PROMPT SHIPMENTS OF
ANY SIZE, SHAPE, OR GRADE STONE
YOU MAY DESIRE.

**Uniform Quality,
Wonderful Durability,
Every Stone Guaranteed.**

(SEND FOR CATALOGUE).

The NORTON EMERY
and

CORUNDUM WHEELS

—ARE— **AIIG .4 100**
QUICK CUTTING, *Out Port 22*
DURABLE, WATERPROOF.

NO DUST, NO ODOR.

EVERY WHEEL



TESTED BEFORE
SOLD.

(SEND FOR CATALOGUE).

SOLE CANADIAN AGENTS.

The Fairbanks Company

Montreal

Toronto

Winnipeg

Vancouver

MACHINERY

THE MACHINERY MARKETS.

Quebec.

Office of **HARDWARE AND METAL**,
10 Front Street, East.
Toronto, June 10, 1904.

GOOD as the machinery market has been for the past two weeks, there seems to be an indication that it will be still better in the near future, as far as one can judge from the outlook, as viewed by some of the Montreal dealers. During the present week there is a slight dullness which is no doubt due to the unfavorable weather resulting in the holding back of intended installations. At several of the machinery agencies surprise was expressed at the rumor that American manufacturers were cutting prices for Canadian export, as they had heard nothing of it, and stated that prices continued the same. The representative of one American firm who was in the city this week, said that they were doing 75 per cent. of the business they did during the boom, and that they had no difficulty finding a market for their output, without increasing discounts.

As reported last week, the demand for wood working machinery still keeps up, and several boiler installations are reported. An order for a 25 ton crane was also received. Electrical machinery is in good demand, and several orders have been placed for complete electric installations.

Ontario.

Office of **HARDWARE AND METAL**,
10 Front street east.
Toronto, June 10, 1904

NO very important contracts have been closed by local dealers this week. The usual amount of business has been done, but nothing special has transpired. Enquiries have been coming in, and the prospect for the closing of a few substantial orders are fairly good.

The demand for engines and boilers has not been so brisk as it has been for some time, while the amount of business done in planing mill machinery and wood working machinery in general has not been quite up to the mark. Iron working machinery has made a fairly good showing.

Machinery and Electrical Notes.

A NEW boiler making plant is about to be established in Canada, and will probably be located at Amherst, N. S. It will be a Canadian branch of the Robb-Munford Engineering Co., of Boston, and for this purpose the capital stock of the company has been increased \$450,000. A large amount of new machinery will be required to equip these works.

The Canadian Government has granted a patent to N. J. Gregorie, St. Johns, Que., for an electric time switch.

The right tool for the job is always the best tool, and vice versa. Don't use either a monkey-wrench for a hammer, or a hammer for a monkey-wrench.

The extension of the Guelph street railway from the terminus on the Elora road to the Union cemetery has been commenced. The amount of track needed in the extension will be 3,000 feet.

A company is being organized in St. Thomas, Ont., to run an auto car between that city and Port Stanley. It is proposed to make hourly trips, carrying not more than 25 persons each trip.

The Toronto & Niagara Power Co. are seeking suitable sites in Toronto and Niagara for sub-stations, to be used in the distribution of the electrical energy transmitted from the power house at the Falls.

The Fredericton Gas Light Co., Fredericton, N. B., have placed an order with the Westinghouse Electric Co. for a 175 kilowatt direct connected generator. They have also placed an order for a 300 horse power cross compound Robb-Armstrong engine, and a Mumford boiler of greater horse power.

Construction work has been commenced on the new power house of the Winnipeg Electric Street Railway Co. The new plant will practically double the present power plant. It will be 110 feet long and 55 feet wide, and the building operations will be hurried forward. The Street Railway Co. are also having erected two new car sheds, and are extending the present gas plant. Altogether the company will expend \$500,000 in improvements.

R. Moncel, electrical contractor, St. Peter street, Montreal, has under way a large saw mill wiring contract at Sudbury. He is also engaged on the Canada cold storage building, and is commencing to instal the electrical equipment of the new F. X. St. Charles building on St. Francis Xavier street.

The College Bourget has just been finished at Rigaud, by Durand & Co., of Joliette. It is a handsome five-storey cut stone building, 55x120 ft., situated on the hill commanding a splendid view of Ottawa. It is heated by steam, and is at present lighted by acetylene gas, but a complete electric plant is about to be installed.

The City Council of Nanaimo, B. C., has received a communication from C. Brandeis, electrical engineer, representing a Montreal syndicate, asking for a charter for the construction of an electric street railway system. The company also proposes building a suburban line between the city and Brechen, at the newly discovered coal fields of the Western Fuel Co. The power will be derived from the Nanaimo River Falls.

S. R. Callaway, president of the American Locomotive & Machine-Works, is dead, and in his death is removed a very prominent figure from the railroad circles of this continent. Mr. Callaway is a Canadian, having received his railway training with the Grand Trunk. He became manager of the now Grand Trunk Western, and thereafter his career may be traced from step to step until he became railway manager of the New York Central. In 1901 he resigned this position to assume control of the extensive operations of the American Locomotive & Machine Co.

It is said that the Grand Trunk Railway Co. have acquired an option on a controlling interest in the Hamilton, Grimsby & Beamsville Electric Railway, and that before this month is out the electric railway may be turned over to the G. T. R. Co. The proposal is to run the line as an adjunct of the steam railroad. For some time the H. G. & B. Co. have been doing a large business in the fruit line in connection with the C. P. R. and the Dominion Express Co. and it is understood that all this fruit business will be diverted to the G. T. R. and the Dominion Express Co.

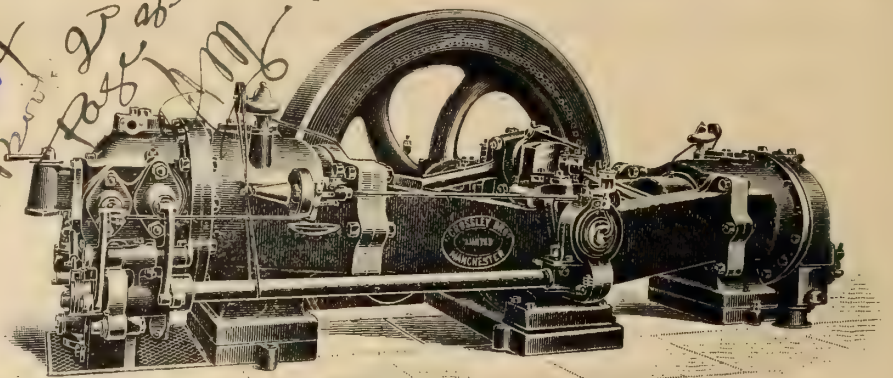
THE FIELD OF THE GAS ENGINE.

ABOUT ten years ago it was prophesied that gas engines would, in a very few years, entirely displace steam engines, but the steam engine was too long in the field and too firmly established to be easily discarded. Since then many refinements have taken place in the steam engine to help it keep its hold, but the gas engine has been steadily increasing in popularity, and has in many places superseded the others, but to a much greater extent in England and Europe than in America. This latter is probably due to the fact that gas has not been cheap in America, and electric motors have been introduced in such enormous quantities that gas engines have not been in such great demand.

The idea of deriving power from the energy of an explosion by means of a motor is at least as old as Watt's invention of a means of turning the expansive force of steam to account. Huyghens proposed, in 1680, to make an engine in which the explosion of gunpowder in the cylinder would force the piston forward and so produce power.

Something like this is what is done in the gas engine. However, it is hardly necessary to say that no practical

was the Lenoir gas engine of 1860. In this engine a mixture of gas and air was drawn into the cylinder for about half-stroke, the valves closed, and the mixture ignited or exploded, producing thus for the last half of the stroke con-



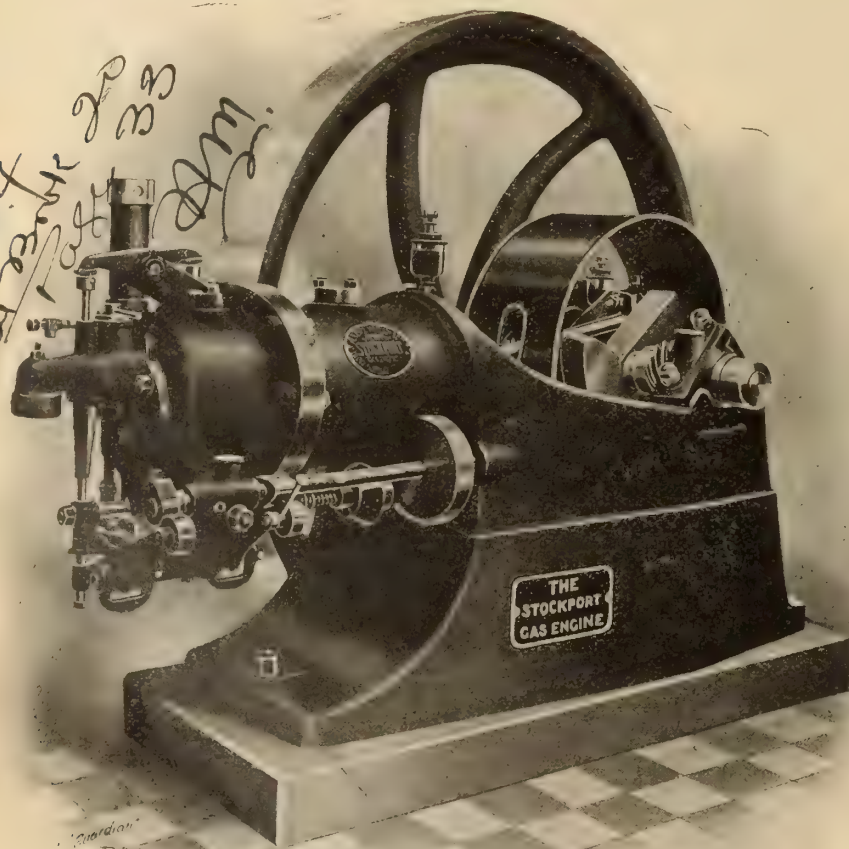
800 h. p. Gas Engine.

working motor was made on this plan nor at this time. Several more or less successful attempts were made to solve the problem, but the first successful internal combustion motor or gas engine

siderable pressure. This engine was double acting, like the ordinary steam engine, that is, it had the force applied on opposite sides of the pistons alternately. These engines were

introduced commercially to some extent, as they ran smoothly and quietly, but consumed a rather large amount of gas. As Watt's steam engine was introduced in 1769, it had a long start on the other. The next great step in advance was the introduction in 1876 of the famous Otto gas engine, and as practically all engines built since operate on the same plan, a brief description will be given. The engine is usually single acting, or in other words, receives the pressure of the explosion only on the back side of the piston, the front of the cylinder being open. A series of operations is as follows:

The piston being at the back end of the cylinder, and just ready to start forward, the inlet valve opens, and the mixture of gas and air is drawn in as the piston moves forward. When the piston has reached the limit of its forward movement, the cylinder is full of the mixture of gas and air. All the valves then close and the piston on its return



Gas Engine for Dynamo.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

NEWMAN'S PATENT INVINCIBLE FLOOR SPRINGS

Combine all the qualities desirable in a Door Closer. They work silently and effectually, and never get out of order. In use in many of the public buildings throughout Great Britain and the Colonies.

MADE SOLELY BY
W. NEWMAN & SONS, Birmingham.

WHY NOT BUY

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Brass Globe, Standard and Copper Alloy Discs, Steam and Hot Water Radiator Valves, Brass and Iron Weber Gate Valves, Check Valves, etc.

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THOSE WHO DO GET SATISFACTION.
SEND FOR CATALOGUE.

THE KERR ENGINE CO.,
WALKERVILLE, ONT. Limited

SPECIFY



INJECTORS

PENBERTHY INJECTOR CO.,
LIMITED.

BRASS MFRS.

Windsor, Ont.

Buy the Best.



HERCULES

Sash Cord.

Star Brand Cotton Rope
Star Brand Cotton Clothes Lines
Star Brand Cotton Twine

For Sale by all Wholesale Dealers.



"Pullman" Lawn Sprinkler

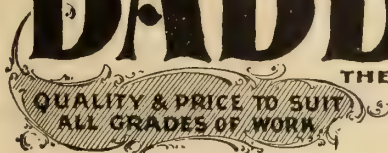
IS YOUR
ORDER IN?

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PRICES
RIGHT
GALVANIZING
ONT.
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ENGINE & PUMP CO.
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BABBIT



THE

CANADA METAL CO.

NO. 1
STAR
SPECIAL
HERCULES
METALLIC
IMPERIAL

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



BEAVER POST HOLE DIGGER

will please your customers.
No wood to rot or check.

SPECIAL DISCOUNTS TO THE TRADE.

CANADA FOUNDRY COMPANY,
LIMITED

Head Office and Works, TORONTO, ONT.

District Offices — Montreal, Halifax, Ottawa, Winnipeg, Vancouver, Victoria, Rossland.



If Corundum be no Better Than Emery, Then Emery is no Better Than Iron Ore.

If the United States Government be right when it states that emery is a mechanical admixture of iron ore and corundum (Bulletin No. 180, Department of Interior), then you must agree that the above deduction is logical.

To use iron ore for polishing or grinding iron or steel would be absurd; then why use iron ore and corundum (emery) when you can obtain the pure abrasive—

CRAIG MINE CRYSTAL CORUNDUM.

The **Canada Corundum Company, Limited**
TORONTO, CANADA.

stroke compresses the mixture of gas and air. As the piston again starts forward, the compressed gas and air is exploded, or ignited, by a spark, and the pressure thus produced is the source of the power of the engine. On the next stroke the products of combustion are expelled from the cylinder through the exhaust valve. The same cycle of operations is thus repeated indefinitely. It thus appears that only one stroke in four is effective, and during the rest of the time the motion of the fly wheel is all that keeps the engine going, thus a gas engine must have a very heavy fly wheel.

The greatest thermic efficiency of a steam engine is fourteen and one-quarter per cent., while that of the gas engine might be eighty-seven per cent., and it is quite possible to get in actual practice an efficiency as high as half of this. It might be noted in passing that the canon is a gas engine, converting heat energy into mechanical, which has an actual thermo-dynamic efficiency of 50 per cent.

The gas engine possesses several advantages over the steam engine, among which are: Cleanliness and freedom from drip, ashes, smoke, and other objectionable accompaniments of the steam engine. The boiler and the danger of boiler explosion are eliminated. A licensed engineer, or even skilled labor, is not required to operate it. There is much less loss of energy in starting and stopping a gas engine than a steam engine, and there is no waste during the periods when the gas engine is idle between runs. On the other hand, gas engines are not self-starting, but require to be turned over by hand, or by some auxiliary motor when used singly. They are apt to stop when overloaded, and the admission of the gas is sometimes troublesome. The cylinder usually requires to be water-jacketed, and even then the high temperature interferes with the lubrication. They are generally accompanied by a disagreeable odor.

The efficiency of gas engines has been, and is now being, steadily increased. At present the consumption of ordinary illuminating gas is about 20 cubic feet per h. p. hour in a fairly good engine of reasonable size. Even better economy than this is often obtained, and figures as low as 17, or even 15, cubic feet per h. p. hour are often realized in actual practice.

Exporting Files.

The Nicholson File Co.'s Dominion Works are shipping a quantity of their increment cut files to England. The "Maple Leaf" brand is meeting with a ready sale. They are also having increased demand from all parts of the Dominion for the "Kearney & Foot," "Great Western," "Arcade," "American," "Globe," and other brands, which keeps their factory busy.

THE QUESTION OF LATHE QUALITY.

EVIDENTLY the question of the relative merits of the lathes offered on the Canadian market has aroused general attention on the part of the trade. Many readers have favored Hardware and Metal with their views, but for one reason or another some of them decline to be quoted.

A Guelph manufacturer, who was included among those who declined to have his name published, was enthusiastic over Canadian lathes. "Why," declared he, "the lathes made by Macdougall, of Galt, or Bertram, of Dundas, are as good machines in every particular as the imported article. These firms put solid merit and up-to-date, practical utility into their lathes, and so are able to meet in the matter of quality any machine tool maker who offers machines on the Canadian market."

THE DODGE MFG. CO.

C. F. Wheaton, secretary-treasurer of the Dodge Mfg. Co., Toronto, summed up his views as follows:

"We consider the lathe manufactured by the John Bertram & Sons Co., Ltd., Dundas, Ont., to be as good, if not better, for ordinary purposes, than any other lathe on the market, whether Canadian or American."

ROBERT LAWSON, TORONTO.

The Toronto representative of Darling Bros., Robert Dawson, said when interviewed by Hardware and Metal:

"There can be but little doubt that John Bertram & Sons Co., Ltd., Dundas, build the best Canadian machine tools. I think that the engine lathes for ordinary work, built in Canada, display as good workmanship, and are as true as the ordinary engine lathe built by any manufacturer in the States. To compare Canadian and American manufactured lathes in a more general way is very difficult, since there is such a variety of lathes built in the States, compared with the limited number of kinds turned out by Canadian firms. I think it hinges entirely on the largeness of the American market and the smallness of the Canadian market. The large American tool builders specialize in one line, lathes, planers, drills or some other, and they are in a position to develop that line to a much greater extent than any Canadian tool builder, since the Canadian builders cannot afford to specialize in one line of tools

because the market for that line will not warrant the specialization. Some Canadian firms will manufacture a special kind of lathe if you wish one, but the trouble is that they have to start right at the beginning, namely, with the design and patterns. The patterns have to be made specially for that tool, and therefore their cost has to be added to the cost of the tool. Whereas, if you go to an American lathe builder for a special lathe, he has a very large number of styles that they turn out regularly for you to choose from; and although you may not find exactly what you wish, it is very probable that you will be able to find something very close to it, the slight alterations in which will not increase the cost of the tool materially. Therefore, without doubt the American tool builder has a great advantage over the Canadian builder in special lines.

"Then, considering ordinary engine lathes, although the Canadian builder has the advantage of the 25 per cent. duty, still the raw material has to be taken into account. For the best line of tools American iron is always used, and therein the American builder can get ahead of the Canadian in being able to obtain his raw material at a lower cost."

WILKINSON PLOW CO.

The Wilkinson Plow Co., Toronto Junction, are of the opinion that for all ordinary machine shop work the best engine lathe built in Canada cannot be excelled; and the superintendent of the works thinks that there is little doubt but that the lathe turned out by the John Bertram & Sons Co., Ltd., Dundas, is the best on the Canadian market.

"There are very many special lathes manufactured in the States," said the superintendent, "that are not attempted in Canada. The American builders specialize; while Canadians cannot do it, and therefore, the American builders hold the market for special tools."

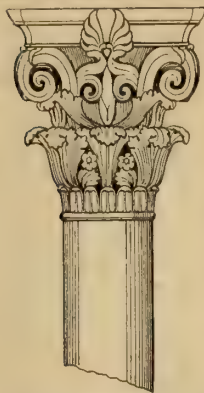
The Menz Lumber Co. have been granted a license to do business in Manitoba.

The Winnipeg Paint and Glass Co., Winnipeg, are applying for power to increase their capital stock from \$75,000 to \$250,000.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.



**Metal Sash
Bars,
Capitals and
Bases for
Plate Glass
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Various Finishes.
Write for Prices.

**Dennis Wire
& Iron Co.**
London, Ont.

Fine Metal Finishes on Builders' Hardware.

I do much fine work of this sort for leading jobbers and manufacturers.

Have you ever work of this sort to give out? Write me.

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Electro-Plater,

112 Church Street, - - TORONTO

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Threshermen, Attention!

The Threshing belt that gives the greatest satisfaction is the "MAPLE LEAF"

Stitched Cotton Duck Belt

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DOMINION BELTING COMPANY
HAMILTON, ONTARIO, Limited

Ask your dealer for it and take no other.

Beware of Imitations

Our "MAPLE LEAF" Belt Dressing is the best on the market—made only by us.

ASK YOUR DEALER FOR IT

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Manganese Anti-Friction Metal

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Every ounce guaranteed.

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12, 16 and 20 Gauge.
Steel and Twist Barrels

Superior in Design, Workmanship and Finish, and the most popular Gun on the Market.

Simplest
"Take Down"
Gun Made



HARRINGTON & RICHARDSON ARMS CO.

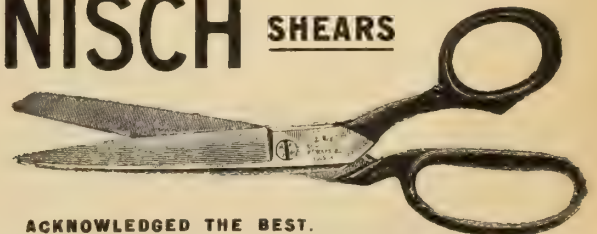
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Trimmers' Shears,
Tinners' Snips, etc.



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NEW YORK OFFICE, 155 Chambers St
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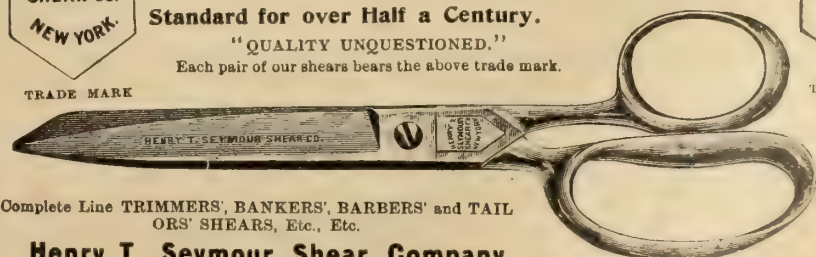
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TRADE MARK



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Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

Henry T. Seymour Shear Company.

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.

The Steam Turbine.

IN common with all other steam engines, turbines transform into mechanical work the energy given out by steam during its expansion from the initial pressure of admission to the pressure at the exhaust. But while reciprocating engines effect this transformation of energy by means of variation in pressure of the steam, turbines can effect it both by means of the pressure and by means of the velocity of the steam while expanding. The employment of the velocity only in each moving wheel characterizes the action or impulsion turbines, among which may be cited the Laval and Curtis turbines, as well as that designed by Prof. A. Rateau, while the simultaneous employment of the velocity and partial use of the pressure characterize the reaction turbine, of which the best known type is that of Parsons.

Whatever the method in which the steam acts the chief problem is the employment efficiently of the very great velocities attained by steam in expanding. When the expansion takes place in one stage, as in turbines with a single wheel, the velocity of flow reaches a value usually above 3,600 feet per second. But to obtain the maximum efficiency the moving part of the machine should have a relative velocity approximately half that of the steam. As it is practically impossible to construct turbine wheels for a peripheral velocity above 1,200 feet per second, the efficiency with a single wheel is necessarily low, due chiefly to the necessity of using diverging inlet nozzles in which occur losses by friction and eddying. Angular velocities which correspond to these peripheral speeds prevent direct driving, and render necessary reduction gears, which are subject to excessive wear and accidental breakage.

These circumstances have led to dividing the expansion of the steam into successive stages by producing turbines with multiple wheels, which are a series of simple turbines mounted upon the same shaft and driven successively by the same current of steam. This design of multiple turbines is by no means novel.

Every simple turbine may be designed either as an impulse turbine or as a reaction turbine. The fall of pressure under which the impulse turbine acts, takes place solely in the distributor, while in the reaction turbine the fall also takes place in the moving wheel. In the impulse turbine the vanes in transverse section have the form of an arc of a circle, with entrance and outlet angles practically the same, whereas in the reaction turbine the vanes have the form of a parabolic curve.

CONDENSED MACHINERY ADVERTISEMENTS.

MACHINERY WANTED.

Notices under this heading inserted free for subscribers to **HARDWARE AND METAL**.

DRY KILN APPARATUS—for small heading mill; must be cheap and in good repair. Box 18, **HARDWARE AND METAL**, Toronto.

MINING tools wanted, steam pump or ejector, forge, hammers, sledge, 1-in. steel, etc. Box 15, **HARDWARE AND METAL**, Toronto.

WANTED—Paper-cutting knife and scoring machine. Address, giving prices, to Box 22, **HARDWARE AND METAL**, Toronto.

WANTED—Good second-hand double spindle drilling machine, with a maximum distance between centres of at least 50 inches. Apply **HARDWARE AND METAL**, Toronto.

WANTED—Second-hand water motor—not less than 1½ horsepower or more than 2 horsepower; water pressure 45 lbs. Apply to Box 184, Cornwall, Ont.

MACHINERY FOR SALE.

Special rates will be quoted for notices under this heading for periods of three months or longer.

A GASOLINE ENGINE—That has stood the test and proven to be the most economical ever operated in America. Made by Tuerk Iron Works, Berlin, Ont.

ESTIMATES given on forced and induced draft fans for steam plants. Sheldon & Sheldon, Galt.

ENGINE LATHE—Swings 17 in. over shears, takes 4 ft. between centres; good order; cheap for cash. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

FOR SALE—Brown automatic engine—cylinder size, 17 by 36; been used very short time. Toronto Carpet Manufacturing Company, Limited.

GASOLINE ENGINE—Six horse power; second-hand; good as new; cheap. Box 444, Berlin, Ont.

GAS and gasoline engines, stationary, marine, automobile; also launches; silver medal, highest award Dominion Exhibition, Toronto; also Toronto Exhibition, 1902; write for catalogue. The Gasoline Engine Co. of Toronto Junction, Limited.

HOISTING ENGINES, derricks, continuous concrete mixers, 250 yards capacity; dump cars, railway construction cars, track-laying tools, boilers, etc. Marsh & Henthorn, Belleville, Ont.

IRON PLANER—24 in. x 24 in. x 6 ft., second-hand in first-class condition, for sale; a quick turn over. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

NORTHERN IRON WORKS, Winnipeg—Steam plant, consisting of a famous Buckeye high speed automatic 50 n. p. engine, Leonard return tubular boiler 70 h. p., smokestack and steam pump; a bargain is offered for quick sale. This is a first-class outfit, and our price is away down low.

NEW STATIONARY ENGINES—20 x 24 Waterous sawmill engine; 14 x 18 Waterous sawmill engine; 9 x 10 McEwen engine; 13 x 14 McEwen engine. Waterous, Brantford.

ROCK DRILLS for waterworks excavating, quarries and mines; steam hoists for builders, mines and quarries; simple, compound and triple marine engines, for pleasure launches. The Dominion Rock Drill Co., Napanee, Ont.

SOME modern woodworking machinery and motors for sale. Box 23, **HARDWARE AND METAL**, Toronto.

THE A. R. WILLIAMS MACHINERY CO., Limited, Toronto, have for sale for prompt shipment the following: Two 10" four side moulders, new; 42" new sand papering machine; new 40" Cowan resaw machine. Send for prices.

THE FAIRBANKS CO.—Temporary warehouse, 124 Bay—standard scales, valves, trucks, letter presses, shafting, hangers, pulleys, belting, mill supplies, machine tools; "Fairbanks" gas and gasoline engines; write for price list.

THE STUART MACHINERY CO., Winnipeg—One 50-light dynamo, direct connection with gasoline engine; 20 electric motors and dynamos, from ¾ horse power to 1,000 lights; sole agents for McGregor-Gourlay's iron-working and wood-working machinery.

AGENCY WANTED.

WANTED—To secure agency in Manitoba town for modern gasoline engine; state terms and commission. Box M 14, **HARDWARE AND METAL**, Toronto.

SITUATIONS VACANT.

A LATHE HAND—In first-class shop; young man preferred; state references and give wages expected. Box 19, **HARDWARE AND METAL**, Toronto.

COMPETENT ENGINEER—To take management and operate local company near Toronto, who can invest \$2,500.00, which will be secured by first mortgage on plant at 6 per cent. Address Box 462, Mail and Empire Office.

ELECTRICIAN WANTED—Hespe'er municipal electric light plant; must be able to do line work; all night system; steady man wanted; state experience and salary wanted. J. W. Christman, chairman electric light plant, Hespeler.

FINISHER—First-class on lathe, planer and vise, who can dress his tools; state age, experience and wages; steady employment for right man. Beatty Bros., Box 36, Fergus, Ont.

MACHINIST—Planer hand—On engine and heavy machinery; permanent situation for good, steady, sober man; state experience and wages. M. Beatty and Sons, Welland, Ont.

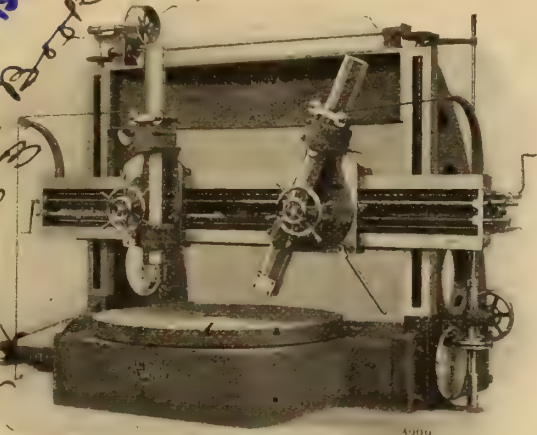
WANTED—Practical electrician; must have references re character and experience, to join firm already established, with good connection. Box 21, **HARDWARE AND METAL**, Toronto.

MACHINE TOOLS FOR HEAVY WORK.

ILLUSTRATIONS are given herewith of a few of the many makes of machine tools manufactured by the Niles-Bement-Pond Co., who are among the largest manufacturers of machine tools in the world, and whose name is a guarantee of quality. They are represented in Canada by the Fairbanks Co.

VERTICAL BORING AND TURNING MILL.

With the advent of the new high power tool steels, making higher speeds and heavier cuts possible, the vertical boring and turning mill, an illustration of which is given, is entirely supplanting the lathe for face-plate work. Its horizontal table offers greatly increased facilities over the vertical face plate of the gap or pit lathe for setting and clamping work. The two independently



7-foot Boring and Turning Drill.

adjustable heads of the boring and turning mill, are another point of its superiority over the lathe, as both heads may be used on work at the same time. In the 37 in. and 51 in. mills a single casting forms the bed, housings and top brace, making an exceedingly rigid machine. In the larger machines the beds are cast in one piece, up to the limits of shipping sizes, are strongly ribbed and are well braced for all strains. The cross rails are of heavy box-girder section and are provided with power elevating gear. The tool bars swivel, and on the larger mills are set over by means of worms to any angle. Both are counterbalanced by a single weight, which is only half the weight of one tool bar and supports them perfectly in all positions. The saddles or tool bars may be fed in the same, or opposite directions. On all sizes above 37 in. mills, the tables have an annular bearing on the beds nearly the full diameter. For light work and high rotative speeds, the spindle step may be raised, thus lifting the table from the annular bearing and reducing the friction. On the 37 in.,

51 in. and 60 in. mills, each saddle is provided with independent positive gear feeds. A movement of a lever reverses the feed, another lever changes from fine to coarse feed, and vice versa. There are eight feeds to each head, four for roughing and four for finishing. All the feeds of one set are obtained by the moving of a sliding gear. On the larger mills the saddles have rapid transverse by ratchet-lever. Vertical boring and turning mills may be provided with the following attachment: Centre boring head driven from overhead by a separate countershaft, and having speeds and feeds entirely independent of the mill; independently driven boring-bar, for the left hand saddle, designed to bore in the centre and at any radial distance; slotting attachment; chasing attachment,

having a set of lead-screws, one for each pitch; turret-head mounted on a slide, having vertical travel on the saddle; independent chuck-jaws, universal chuck-jaws and combination chuck-jaws and car wheel chuck. Mills with the extension housings can be furnished where the majority of the work is of standard size, but an occasional piece of large diameter is encountered. The mill, of which the illustration is given, has a

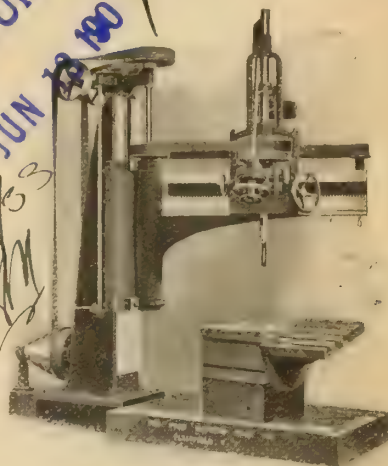
swing of 81 in. with the greatest height under the tools of 48 in.

RADIAL DRILLING MACHINE.

This company manufacture a complete line of radial drilling machines adapted for every variety of service. In the design of these machines special attention has been paid to convenience of handling. In this respect the motor driven machines are particularly advantageous, as the controller may be operated by a handle at the end of the arm, or by pendant cords.

In the universal radial drilling machine, both the arms and saddles swivel. In the machine with plain arms the saddle alone swivels. The machine shown is a 5½ ft. radial drill designed for the heaviest service. Spindle is driven

either directly or through back gears from pulley, so that, for ordinary drilling, the smooth motion given by a belt is obtained, and it will drill to the centre of an eleven-foot circle. The great-

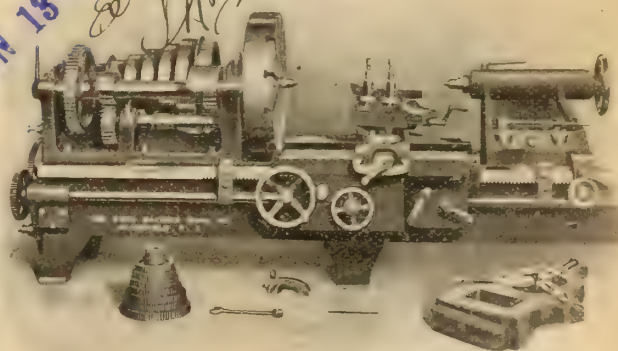


5½-ft. Radial Drilling Machine.

est distance from the face of column to the centre of spindle is 69 inches, and the greatest distance from base plate to spindle is 89 inches, while the spindle itself has a traverse of 18 inches. This machine is provided with a box table, having swivel shelf.

HEAVY ENGINE LATHE.

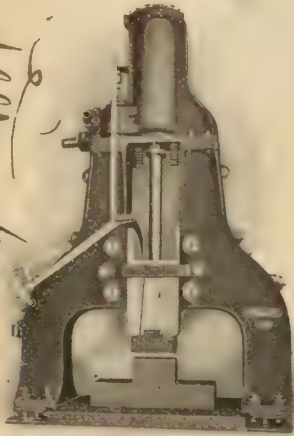
An illustration is given herewith of a 32 in. triple geared engine lathe embodying the most improved practice, and adapted for heavy cutting, such as is made possible by the greatly improved tool steels now being generally used. Different patterns of these heavy lathes are manufactured, which are uniform and the parts interchangeable. The spindles are hammered steel running in bronze lined bearings, the tail stocks have set-over for taper turning, are



32-inch Engine Lathe.

easily moved by gearing engaging with steel racks, and have large hammered steel spindles. The carriages are fitted with compound swivelling tool-slides, and have screw-cutting attachment, longitudinal and cross-feeds. The 48

in. lathe and large sizes are furnished with power angular-feed, which may also be provided for the smaller machines extra if desired. When two carriages are required, they may be made right and left. All the feeds are inde-



5000-lb. Double Frame Steam Hammer.

pendent of each other, and so interlock that only one feed can be in use at one time; the direction of the feeds can be changed at the carriage. The gear engaging feed-rack can be disengaged when cutting screws, thus preventing an uneven motion caused by revolutions of the feed gearing. The beds are deep, of box form, wide enough to prevent the tool over-hanging the front, when turning full swing of the lathe, and may be made of any desired length. These lathes can be driven to advantage by direct connected motors.

STEAM HAMMERS.

These hammers are rated according to the actual weight of the falling parts, thus: a 1,100 lb. hammer is one in which the ram piston and upper die weigh 1,100 lbs. The steam on the top

double framed steam hammers take wear of the ram may be taken up at either end independently. In the single frame hammers the ram and guides are set diagonally to the frame at the proper angle for drawing and finishing. The valve gear is simple and substantial and consists of but three moving pieces. It takes up its own lost motion by gravity, and having no connection with the ram, it escapes all concussion. It is operated either automatically, or by hand, producing by means of a single lever every variation in length, rapidity, and force of blow. The safety buffers prevent damage by careless handling, and when removed enable the piston to be raised above the cylinder for the renewal of packing rings. The anvils are separate with removable caps keyed to them above the floor line. Any hammer may be fitted with a treadle by which the smith may work the valve gear with his foot. It takes approximately one horse power per 100 lbs. falling weight to operate these hammers. The foundations are simple and inexpensive. They consist of two piers to support the hammer, and one pier for the anvil. The anvil pier is made separate from, and deeper than, the other piers. A warning mark is placed on the guides, which shows when the piston touches the bottom of the cylinder. Before the top of the ram reaches this mark, the anvil must be raised, or a higher die used. Two illustrations of these steam hammers are shown, one a 5,000 lb. double framed steam hammer, with an 18 in. cylinder, and a stroke of 48 inches, and the other a 3,300 lb. single frame steam hammer, with a cylinder diameter of 15 inches, a stroke of 42 inches, and a die surface 10x16 inches.

Cylinder Oil in Boilers.

In the June issue of Power, "O. J." says he has seen cylinder oil removed from large double ended Scotch marine boilers in the following

The boiler was emptied and a temporary connection of $\frac{3}{4}$ inch or 1 inch pipe was made from the steam line to the lower part of one of the water gage columns. About 75 gallons of kerosene were poured into the boiler, after which the boiler was closed up. Steam was turned on the water gage column, allowing the steam to enter the boiler at the bottom, but only so as to start the kerosene boiling. If there was not enough kerosene to cover the steam connection inside the boiler, enough water was pumped in to do so. If there was time to do a good job of it, the boiling was allowed to continue until enough steam had condensed to show the water

at the usual steaming level in the boiler: with less time in which to do the job, a few strokes of water was pumped into the boiler with the feed pump once every two hours. When the water reached the steaming level, steam was shut off (the boiler held 40 tons of water when at steaming level) and after allowing it to cool down some the top man-hole plate was removed and the boiler flooded so as to allow the oil on the surface to float off. The boiler was emptied and all manhole plates removed. An inspection at this stage showed splendid results, for the cylinder oil had loosened up so that, aside from the necessity of wiping it off at a few places, all there remained to be done to finish the cleaning was to give the boilers a good washing out with a strong stream of water from a fire hose.

When a boiler is thus boiled out and opened, care must be taken that no fire or open lights are brought near the manholes before the boiler has been washed out and well ventilated, for there is danger of igniting the kerosene vapor and causing an explosion.

Electric Locomotive Power.

THE electric locomotives which are to be used for operating the trains of the New York Central and New York, New Haven & Hartford railroads within a radius of 50 miles of New York, and which are being built at the Schenectady shops of the General Electric and American Locomotive Companies will have a capacity of 2,200 horse power each. The present large steam locomotives which haul the Empire State Express have an indicated horse power of 1,500 when running at a speed of 60 miles an hour.

These electric locomotives, of which about 30 were ordered, are of an entirely new design, will weigh 85 tons each, with an adhesive weight on the drivers of 67 tons, and will be capable of hauling a train of 500 tons at a speed of over 60 miles an hour. The locomotive will be a double ender, running equally in either direction, and will have four motors of 550 horse power each. The motors will have only two magnetic poles, instead of four, the usual number in railway motors, and the armature of each motor, instead of working through gearing, will be pressed solidly on the axle, having been previously assembled on a quill for this purpose. The Sprague-General Electric multiple unit control will be installed on all the engines, so that two or more of them can be coupled together and run by a single motorman.



3300-lb Single Frame Steam Hammer.

of the piston enormously increases the steam above and below the piston. They are fitted with adjustable guides and the force of the blow. The single and

Window and Interior Displays

Timely Hints and Suggestions

The Real and the Imaginary.

By Will W. Sawyer.

HERE is probably no detail of modern retail business which is as little understood by the public in general and the merchant in particular as that of window trimming. The sketch by Bill Nye of the Indian girl of fiction and the Indian girl of fact serves well as an illustration to point out the difference between the real and the imaginary. The first, a charming creature with flowing hair and dainty form, tripping lightly o'er the meadows, chasing bird and butterfly. The second, an ugly old squaw with a rabbit in hand and a bundle of sticks under her arm, while between her teeth a clay pipe is tightly held.

The popular idea of the window trimmer and his work may be gathered from the following conversation which recently occurred between a well known trimmer and a member of the fairer sex:

"Oh, yes, this is Mr. —, the trimmer at So and So's! Do you know, I have always admired your windows so much. You always have them fixed up so neat and tasty. It must be so much fun to handle all those nice goods. Really, I sometimes think I should like to be a window trimmer myself. How many stores do you trim for, Mr. —? What, just the one? Don't you have anything else to do when you are not trimming?"

It is not unlikely that this same conversation with slight variations has taken place many times before with other members of the fraternity. It is not to be wondered at that the public at large has so little conception of the time and effort required to produce modern up-to-date window display, but the surprising fact is that the average merchant, who should be in touch with all parts of his business, knows so little about this, one of the most important details of it.

A great many merchants seem to think that if they can but secure the services of a first-class trimmer, that this is all that is necessary to insure them first-class work. They are often willing to pay a good, liberal salary to attain this end, and after they have

secured their man to impose such restrictions on him that they practically tie his hands. Let the trimmer ask for the needed fixtures to facilitate his work and enable him to make modern rapid displays, or for material to properly complete his work, to say nothing of mirrors or carpets, and he is almost invariably told: "You can get along without that." Of course you can, and you do, but the merchant's loss is much greater than yours. The trimmer soon tires of being refused these necessities and gets along without them. He spends his time converting boxes into fixtures, while progressive competition is showing goods. As a result of this condition much more time is necessary in the making and placing of displays than would otherwise be required, and if the trimmer does not succeed in making his displays just as quickly as those of progressive competition, this very merchant is sure to make a howl.

What is the inevitable result of such a course? Simply this—that the trimmer soon discovers that he is in the employ of a nonprogressive house. That his efforts are not only unappreciated, but that he is injuring himself with the firm by attempting any sort of a display that cannot be made in the same amount of time as those of competition. Therefore, in order to please the house, and incidentally hold his job, the trimmer is forced into leaving out much of the detail necessary to produce attractive display. By so doing he converts the best advertising medium into a very poor one.

I would not leave the impression that all merchants are built on this "pound foolish, penny wise" plan. The up-to-date, progressive houses are the exception. These are the stores that realize the advantage gained by judicious show window advertising and consequently support their trimmer in every possible way. I am not for a moment in favor of reckless expense in window trimming. No first-class man will be extravagant, but there is a certain amount of legitimate expense necessary to maintain a set of modern show windows. If more merchants could but realize that employees with years of practical experi-

ence along a certain line are better fitted to know the requirements of their particular work than the merchants themselves, there would be fewer houses with the sheriff looking their way.

The Picture Window.

When window dressers start out with the idea of building a fancy window, they so often lose sight of the fact that the features included that are not a part or an adjunct of the goods handled, are in the majority of cases a waste of time and expense.

By this it is not meant that the picture window has no place in the plans of a window dresser, but that serious consideration should be given the question whether such a display will sell goods, and whether just as attractive a window cannot be arranged out of the goods themselves, or with accessories that are closely related to the goods shown. If this is not possible the picture window can be used occasionally—not oftener than the special holiday seasons, and perhaps two or three times more.

In the present development of window dressing the picture window (and by this is meant the one that contains no or slight reference to any line of goods carried) is of little service. It may attract a crowd, but so common are tasty displays that the name of the firm exhibiting is often never noticed, and even if it is there is doubt if any substantial benefit results unless made use of on a few occasions only.

There are open to the trimmer schemes in great numbers that are just as attractive to the average public as the picture window, and will prove far more profitable. The expense of dressing these windows is much less, and there is little danger of working in too much and thus ruining the general effect. If the window dresser has before his mind a definite conception of the goods he is to display, and is not simply building a background that would be suitable for dried herring or vinegar, he is less likely to let his imagination run away with him in the production of a scene that would rank with the prospectus of a new gold mining company.

ELECTRICAL GOODS AND SUPPLIES

New Electric Fixture.

THE Canadian General Electric Co., Limited, Toronto, are putting upon the market a new incandescent street lighting fixture which has been especially adapted to withstand the severe climatic conditions prevailing during the Canadian Winter. This fixture was illustrated on page 12 of the issue of Hardware and Metal for May 28. The company recognized the demand for a better street lighting fixture of this kind than those in general use, and the fixture that is now being put upon the market is the result.

It would be worth his trouble for the hardware dealer to look into the advantages claimed for this fixture.

In a climate like ours it is necessary that great care be taken in the design of street lighting fixtures, in order to protect them from the extremes of heat and cold. The almost universal use of metal sockets for both series and multiple systems necessitates a device which must completely protect the socket and connecting leads from the effect of rain, snow and ice.

A first-class street lighting fixture must be electrically well designed, must be mechanically strong, and should be attractive in general design. Particular attention should be had to the electrical design in the case of fixtures used on high voltage series systems, where there is probably a high potential difference between the current carrying parts and the structure proper.

The general form of earlier fixtures has been retained in this one, there being, however, a slight difference in the hood, the cross-arm bell, the goose-neck, the crow-foot and the waterproof socket holder.

The new hood differs from existing types in the formation of a lip or dripping edge at the rim, which effectively sheds all water, thus preventing the dripping of water upon the base of the lamp.

The cross-arm bell consists of a bell-shaped casting, combining a cross-arm for supporting line wires, and a bell-shaped enclosure for protecting the socket, socket support, and the wires connecting thereto, from the elements. The method of introducing the wires to the bell proper ensures a good protection from the elements. Porcelain

bushings insulate the wires from all metal parts, and these bushings are leaded to the iron, thus making a tight joint.

Should any hardware dealer wish to secure a more complete description of this fixture, with specifications and prices, he will be able to obtain the bulletin being sent out by the Canadian General Electric Co., Limited, upon application.

Electric Time Switch.

THE illustration shows a useful and inexpensive electric time switch which every store and factory using electric lights would find of service. Every merchant wants his store windows lighted at night, but few wish to pay for an all night service. This



electric time switch is an automatic contrivance whereby the lights may be turned off at any desired hour. The principle is very simple. An alarm clock is connected with the switch and may be set to "go off" at any hour desired. When the alarm is given a screw at the back of the clock revolves and in doing so turns the switch. There is nothing complicated to get out of order. In most establishments the switch would soon pay for its cost in the saving it effects in the electric light bill. The cost is moderate, to the wholesale trade being about five dollars.

Switches are also made to turn on and off at desired times.

The cut used to illustrate this article was furnished Hardware and Metal by the Sayer Electric Co., Montreal, from whom these switches may be obtained. This firm will furnish any further information desired regarding this time switch and any other electric articles. They have several useful catalogues of fixtures, novelties and telephones, which they will furnish on request.

Through Cable to Germany.

The Canadian Pacific Railway Telegraphs to-day completed a through service between Canada and Germany. The Commercial Cable Company has just completed the laying of a second cable between the United States and Germany, and the Canadian Pacific Telegraphs have been granted direct connection with this cable. There is already considerable business between Canada and Germany and this will enable Canadians to be sure of having all messages put right through without any possibility of delay.

Charge Against Electricity.

A writer in the New York Sun brings out a new charge against electricity, but where he received the inspiration, or what led him to lay the charge, he does not say. He says: "There are irrefutable facts at hand, proving that the use of electricity has caused, during the past fifteen years, a greater loss of property, by fire, flood, storm, and unseasonable weather, than the value of ten railroads like the New York Central." He blames electricity for the cold weather, and storms generally at its universal adoption. He continues: "So intense was the cold last Winter that the ground was frozen six feet deep. In digging graves gunpowder was used for blasting. Millions of fruit trees were ruined, and the corn crop in New York State was only one-tenth of its usual yield. The Government should prevent the use of electricity on such a scale as is now proposed by the New York Central. What are the interests of the railroads and manufacturing electricians as compared with the agricultural interests?" Why he thinks thus, or upon what he bases his argument, the writer does not state, but only makes sweeping condemnations without giving any reasons.

We make Electric Fixtures, Sockets and Cut-Outs

Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.

GAS HEATING APPLIANCES.

HARDWARE AND METAL had a pleasing chat a few days ago at the King Edward Hotel, Toronto, with Geo. Hurst, manager of The Fletcher, Russell & Co., Limited, Warrington, Manchester, and London, Eng. Mr. Hurst was accompanied by Mrs. Hurst, and the two are having a quiet trip through Eastern Canada. While Mr. Hurst had formerly made some trips to the United States, this is his first visit to Canada. Although principally on pleasure bent, he did not altogether neglect business matters. His firm is anxious to secure a larger share of the Canadian trade than they have had hitherto. Naturally, therefore, Mr. Hurst, when opportunity afforded, made inquiries as to the ways and means of accomplishing this.

"What are your principal lines of manufacture?" asked Hardware and Metal.

"We manufacture," he said, "a good many lines. One of our special lines is iron over-mantels, made in imitation of wood and marble, and it would take a

man who was a pretty good expert indeed to tell the imitation from the real."

"Indeed it would," interpolated W. Willis Mitchell, of Jas. Cartland & Son, Birmingham, Eng., by whom Hardware and Metal was introduced to Mr. Hurst.

In reply to further inquiries Mr. Hurst said that these iron over-mantels cost about 50 per cent. less than those made of wood. When Hardware and Metal further queried Mr. Hurst as to the lines his firm manufactured he sent for three catalogues, whose pages he rapidly turned over when they were placed in his hands. These catalogues are in a series of three and all are most elaborately gotten up. The covers are embossed and the illustrations are among the finest that the writer has ever seen. From these catalogues Hardware and Metal learned that Fletcher, Russell & Co. are most extensive manufacturers of gas cooking ranges, gas heaters, gas furnaces, etc. One particularly interesting one shown was the dining car cooking arrangement and Hardware and Metal learned that these were now used exclusively by three of the largest

railway companies in England. Large quantities of the gas furnaces are shipped to South Africa and other gold mining countries. Only a few weeks ago one lot of three carloads was shipped to South Africa.

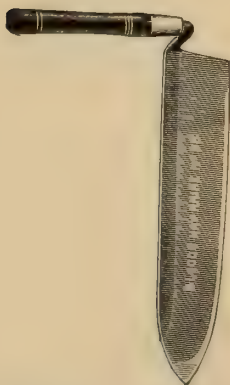
In tool hardening furnaces, Fletcher, Russell & Co. have quite a reputation. For instance until the Westinghouse Co., of Philadelphia, Pa., put in their tool hardening furnaces only four out of twelve tools were brought out in good condition. With the Fletcher, Russell & Co.'s furnaces they are now able to secure results of nearly 100 per cent. That is, only about one tool in 100 goes wrong. This is a result of which the company is naturally very proud. The firm's showroom, according to Mr. Mitchell, is one of the finest in Great Britain.

Mr. and Mrs. Hurst have this week been spending their time largely in Toronto and Niagara Falls, and will shortly return again to their home in Warrington.

S. R. Callaway, president of the American Locomotive Co., is dead.

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SUPERIOR TO ALL OTHERS IN QUALITY, FINISH AND DURABILITY.



No. 95 Serrated Edge Cast Steel **Hand Forged** Blade, Painted Red, two Riveted Handles, length 36 in. packed in 1/2 Doz. Straw Bundles. Shipping weight 65 lbs. to the Doz.

No. 96 Spear Point, Cast Steel **Hand Forged** Blade, Painted Red, Length 20 to 22 in., Hickory Handle, Cast Steel Ferrule, packed in 1/2 Doz. Straw Bundles. Shipping weight 70 lbs. to the Doz.

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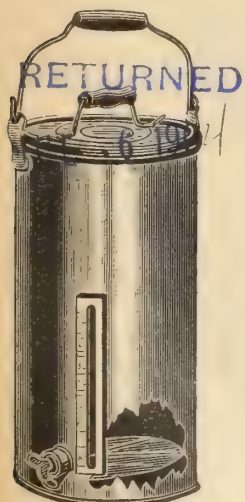
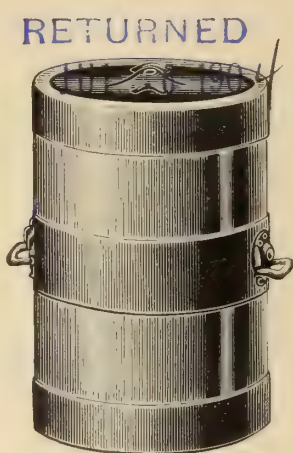
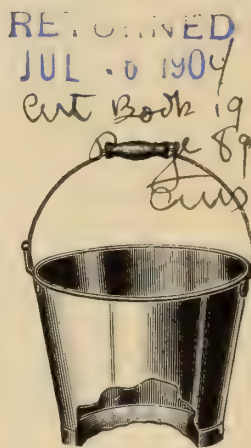
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JOHN BAYNE MACLEAN,
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THE GREEDY CAPITALIST.

HOW frequently the term is sounded in our ears by writers and speakers of every creed and class. If a railway increases freight rates, if two or three companies unite their forces, if a large manufacturer buys out a rival, if the demands of any labor organization are refused, our suspicions are at once aroused by the army of critics who arise to dilate on the greed of the capitalist. Often, too often, indeed, there is ample justification for the criticism.

But the question is, are we honest in our criticism of the capitalist, even when we are convinced that he is not treating his customers or his employees fairly and decently? Is the Dominion of Canada above reproach in this matter? We desire to submit that the Dominion of Canada has in some ways been as niggardly as the meanest object of our criticisms in this matter.

In the budget speech made on Tuesday by the Finance Minister, Mr. Fielding, a striking feature was the prosperity of the Dominion, as judged by the state of the national treasury. The surplus, the excess of receipts over expenditures, for

1903 and 1904 (to June 30) is placed at over \$30,000,000 in the two years. From every standpoint of calculation the Dominion is in a flourishing condition.

Yet, despite this prosperity, which by the way is not true of other countries throughout the world at the present, Canada treats some of her most honored and honorable servants with a niggardliness which could only be justified by an impoverished treasury. Need we refer again to the fact that the judges of the Supreme Court of Canada are the poorest paid in the British Empire? Need we again point out that their salaries are still at the point at which they were placed at confederation, though the cost of living has more than doubled in the meantime?

It would be well if this fact were made known by every Canadian who has a desire to preserve the dignity and strength of our judicial system. The business men of Canada have generally recognized the folly and injustice of the treatment given the Supreme Court judges, and Hardware and Metal is confident that it voices the sentiments of its readers in demanding that a fraction (only a mere fraction is necessary) of these big annual surpluses be devoted to relieving the country of the stigma placed upon it by the present niggardly treatment of the judges, and by, in so doing, safeguarding the country against an inefficient Supreme Court in the days to come.

* * *

One objection to increasing the salaries of the Supreme Court judges was raised by a reader the other day, who said: "They should be able to live comfortably on what they are getting; I have to live on much less." Fortunately for the country this viewpoint is not representative. It is a viewpoint that could never be taken by any progressive business man.

There are lawyers who cannot make \$1,000 a year; there are others who can easily make \$15,000 per annum.

If the Supreme Court were made up of judges chosen from the first class the dignity and strength of the court would be lost in a twelve-month. The sufferers would be the business men who had to accept their judgments and to defray the expenses.

If the best men in Canada could be induced to make the necessary sacrifice it might be good business, though it would still be niggardly to persuade them to do so.

But it is a condition, and not a theory, that we are considering. The condition is that many of the best men literally cannot afford to make the necessary sacrifice. Consequently the next appointment may have to be made from the second-class of men—unless more adequate salaries are attached to the office.

The objection of our friend is the same as that raised by a merchant to paying a larger salary than absolutely necessary for a clerk. "Why should I pay \$15 a week to a clerk like Jones does?" queried Brown, "when I can get a young lad to do my work for \$5? His business is not any larger than mine is." The answer came a year later, when Jones found it wise to add another good clerk when Brown was considering whether or not to advance his boy's salary to \$6 a week.

If Brown's business were too small to stand a \$15 clerk it would be unwise to hire one. But such is not the case with Canada. The magnitude and importance of the cases tried by the Canadian Supreme Court are ample justification for the salaries proposed for the office.

THE POSSIBILITIES OF ELECTRIC SMELTING.

PERHAPS no question is of more vital importance to Canada today, as far as industrial conditions are concerned, than that which is agitating the mind of the Minister of the Interior, the Hon. Clifford Sifton, in reference to the development of our enormous iron deposits in the north. It is well known that we have almost inexhaustible supplies of a fine quality of iron ore, but the absence of coal in the vicinity has made the question of smelting it seem heretofore impossible. Quite recently the matter has been searchingly investigated in reference to what has been done in Europe, in connection with the different electro-thermic process for the smelting of iron ores, and the making of steel. The report of the commission appointed to go to Europe, re-

cently published in Hardware and Metal, contained information which fires the imagination regarding the possibilities of Canada as an iron and steel producer.

The report demonstrates that though electric smelting is yet in the experimental stage it has been reduced to a basis of economy and simplicity which makes it an open rival of the blast furnace. The actual operation of furnaces employing the processes patented is being looked forward to with eagerness.

Who would be so rash as to set a limit on the possibilities of this development? Or on its effect on Canadian industries should the commercial application of the process involved prove successful? And there is every reason to believe that such is the case.

The natural conditions that obtain in Canada are even more favorable than those which made a Pittsburg possible, which made the United States the great iron and steel manufacturing country, and which constitutes the backbone of her industrial success. They had coal and iron, and gas and iron, in close proximity, rendering the smelting of the latter an easy matter. We have iron in abundance and water power without limit, and the only link necessary is the perfecting of the electro-thermic processes, and this is now a settled and assured achievement.

It has been maintained till now that our wonderful iron deposits were to no avail, and as far as commercial purposes was concerned were practically useless. The fallacy of this is now apparent, and in the very near future we are certain to wake up to the advantages we possess in this direction. It is safe to say that Canada has yet to experience the greatest industrial awakening she has yet seen, the possibilities of which are only limited by the faith of interested capitalists, which is sure to grow strong, and the credulity of our own people, which should need no stimulating.

AN UNNECESSARY COMMISSION.

SEVERAL thousand dollars will have to be paid from the Canadian treasury in order to enable Judge Winchester to conduct his inquiry into the charges laid against the Grand Trunk

Pacific of favoring and introducing aliens in the engineering department. If the Government are anxious to dispose of the surplus, referred to at such length in Mr. Fielding's budget, it seems to us that much better and more practical ways of spending it might be discovered.

With the object and scope of the inquiry we are in thorough sympathy. If Canada is to build a second transcontinental railway, let Canada and Canadians enjoy all the benefits to be derived from its construction. Let Canadian capital, Canadian labor and Canadian material be used to the utmost extent possible.

But it does seem foolish and unnecessary for the country to go to the expense of a royal commission to investigate the charges. We take it that the Grand Trunk Pacific are fairly amenable to reason and, under existing circumstances, are anxious to keep on good terms with the Canadian public. Surely the management of the projected road might have been approached in a straightforward manner and requested as a part of the bargain to prepare a statement of all the employees on the engineering staff. This could have been done without the expenditure of a cent of public money, and would have been accomplished long before a clerk could draw up the commission. Parliament and the people could then have seen at a glance just how the facts tallied with the charges.

AN INCONVENIENT BILL

ON July 2, 1900, the Treasury Department at Ottawa issued a series of \$4 bills, which have ever since been a source of annoyance to the business community. The trouble with these bills is that they are so frequently mistaken for the one-dollar bill. The perpendicular stroke of the "4" on the back of the bill is so strong, and the remaining strokes of the figure so faint, that this mistake is not surprising.

Like the twenty-cent piece, the four-dollar bill could be quite easily dispensed with. True, it has its use and was doubtless issued for the purpose of facilitating money transactions. But the defect noted outweighs all possible advantages, and we think these bills should be called in.

A BUSINESS MAN'S TARIFF.

GENERAL satisfaction is expressed by the hardware and metal trades with the tariff changes introduced by Hon. W. S. Fielding, Minister of Finance, in the budget speech before the Canadian Parliament on Tuesday.

The tariff may or may not be good politics. That, however, is not the primary concern of the business men of Canada. To them the fact that in the changes made the vital need of the hour, that Canadian industries be safe-guarded against the slaughtering of imported goods, is recognized, and the danger provided against by an additional duty in case of "dumping."

This will, if the scheme is found as workable as it seems to be on first study, prove of great advantage to Canadian manufacturers in time of need, without introducing a system of high protection such as that of the United States or Germany.

The tariff, as may be seen by reference to the detail of changes on another page, includes many revisions which affect the hardware, metal and machinery trades. On the whole the revisions are considered by the business community affected as businesslike adjustments of the tariff.

In this new tariff the Dominion of Canada is furnished with another proof of the wisdom of having as Finance Minister a man of shrewd business judgment. Political astuteness may be a valuable qualification, but in no sense is it such a vital requisite as an ability to adapt one's views and one's actions to the needs of the hour, a quality which every business man must possess, and which Mr. Fielding has demonstrated himself as generously endowed with.

THE HARDWAREMAN AND THE CAMPS.

In the military camps which are being held throughout the country now the retail hardwaremen in the nearby town will find a fair chance for business in many lines. The allowance made each man by the Government is frequently supplemented by money saved up for this outing. When the men get in camp they frequently discover a need of metal polishes, coat hangers, enamelled wash basins, pitchers, plates, cooking utensils, and a hundred and one other conveniences which make their camp life more enjoyable. The retailer who goes after trade in the small items will find that results will justify his enterprise.

THE CHANGES IN THE TARIFF.

THE following clauses in the tariff changes introduced on Tuesday by Mr. Fielding particularly affect the hardware, metal and machinery trades:

Notwithstanding anything contained in schedule D, the minimum duty on the undermentioned articles shall be as follows: Twine and cordage of all kinds, n. e. s., 20 per cent. ad valorem.

Notwithstanding anything contained in schedule D, the maximum duty on the undermentioned articles when imported under the British preferential tariff, shall be as follows: Tableware of china, porcelain or other clay, 15 per cent. ad valorem. Common and colorless window glass, $7\frac{1}{2}$ per cent. ad valorem.

The words "pails and tubs of wood" shall be omitted from item 330 of schedule A.

Item 203 of schedule A shall be repealed and the following substituted therefor: 203—Plate glass, not beveled, in sheets or panes, not exceeding seven square feet each, n. o. p.; 10 per cent. ad valorem. 203 (a)—Plate glass, not bevelled, in sheets or panes, exceeding seven square feet each and not exceeding twenty-five square feet each, n. o. p., 25 per cent. ad valorem.

DUTIES REDUCED.

Duties on the undermentioned articles shall be reduced as follows: Items 22, 151, 170, 171, 172, 173, 175 and 178 of schedule A shall be repealed and the following substituted:

Paraffine wax candles, 25 per cent. ad valorem; paraffine wax, 25 per cent. ad valorem; illuminating oils, composed wholly or in part of the products of petroleum, coal, shale or lignite, costing more than thirty cents per gallon, 60 per cent. ad valorem; lubricating oils, composed wholly or in part of petroleum, costing less than twenty-five cents per gallon, $2\frac{1}{2}$ cents per gallon; crude petroleum, gas, oils (other than benzine and gasoline), above 40 Beaume gravity, at 60 degrees temperature, $1\frac{1}{2}$ cents per gallon; oils, coal and kerosene, distilled, purified or refined, naphtha and petroleum, and products of petroleum, n. e. s., $2\frac{1}{2}$ cents per gallon; lubricating oils, n. e. s., and axle greases, 20 per cent. ad valorem; vaseline and all similar preparations of petroleum for toilet, medical or other purposes, 25 per cent. ad valorem.

ON THE FREE LIST.

The following articles now dutiable shall be transferred to the free list: Whale oil soap, plain basic photographic paper, baryta coated for albuminizing sensitizing hydro fluo silicic acid,

glass cut to size for the manufacture of dry plates for photographic purposes when imported by the manufacturers of such dry plates for use exclusively in the manufacture thereof in their own factories.

FREE MACHINERY.

Printing presses of a class or kind not made in Canada, machinery of a class or kind not made in Canada for the manufacture of linen, machinery of a class or kind not made in Canada for the manufacture of brass goods such as are mentioned in item 492, schedule B, well-drilling machinery and apparatus of a class or kind not made in Canada for drilling for water and oil (not to include motive power), artificial teeth, quassia juice, crude petroleum, fuel and gas oils, 40 Beaume gravity or less, at 60 degrees temperature (.8233) specific gravity.

The free admission of machinery and appliances of a kind not made in Canada for use exclusively in alluvial gold-mining, as authorized by section 4 of chapter 15 of the Acts of 1903, shall be continued until the first day of July, 1905.

Item 608 of schedule B shall be amended by striking out all the words after "the United Kingdom" in third line.

SCIENTIFIC APPARATUS.

Item 462 of schedule B shall be repealed, and the following substituted: "Philosophical and scientific apparatus, utensils, instruments and preparations, including boxes and bottles containing the same, of a class or kind not manufactured in Canada, when specially imported in good faith for the use and by order of any society or institution incorporated or established solely for religious, educational, scientific or literary purposes, or for the encouragement of the fine arts, or for the use or by order of any college, academy, school or seminary of learning in Canada, and not for sale, subject to such regulations as the Minister of Customs shall prescribe."

THE PROVISION AGAINST DUMPING.

Resolved, that whenever it shall appear to the satisfaction of the Minister of Customs, or of any officer of customs authorized to collect customs' duties, that the export price or the actual selling price to the importer in Canada of any imported dutiable article, of a class or kind made or produced in Canada, is less than the fair market value thereof as determined according to the basis of value for duty provided in the Customs' Act in respect of imported goods subject to an ad valorem duty, such article shall, in addition to the duty otherwise established, be subject

to a special duty of customs equal to the difference between such fair market value and said selling price; provided, however, that the special customs' duty on any article shall not exceed one-half of the customs' duty otherwise established in respect of the article except in regard to the articles mentioned in items 224, 226, 228 and 231 of schedule A, the special duty of customs on which shall not exceed 15 per cent. ad valorem. The expression "export price" or "selling price" herein shall be held to mean and include the exporter's price for the goods, exclusive of all charges thereon after their shipment from the place whence exported directly to Canada.

The foregoing provisions respecting a special duty of customs shall apply to

IMPORTED ROUND ROLLED WIRE RODS.

not over three-eighths of an inch in diameter, notwithstanding that such rods are on the customs' free list. Provided, however, that the special duty of customs on such wire rods shall not exceed 15 per cent. ad valorem.

If at any time it shall appear to the satisfaction of the Governor in Council on a report from the Minister of Customs that the payment of the special duty herein provided for is being evaded by the shipment of goods on consignment without sale prior to such shipment the Governor in Council may in any case or class of cases authorize such action as is deemed necessary to collect on such goods or any of them the same special duty as if the goods had been sold to an importer in Canada prior to their shipment to Canada.

If the full amount of any special duty of customs be not paid on goods imported the customs' entry thereof shall be amended, and the deficiency paid upon the demand of the collector of customs.

The Minister of Customs may make such regulations as are deemed necessary for carrying out the provisions of the foregoing sections and for the enforcement thereof. The special duty mentioned in the preceding sections shall not apply to goods of a class subject to excise duty in Canada, nor to imported goods entered for consumption prior to the eighth day of June, 1904.

BOUNTY ON PETROLEUM.

Resolved, that it is expedient to provide that there shall be paid out of the consolidated revenue fund a bounty of one and one-half cents per gallon on all crude petroleum produced from wells in Canada on and after the eighth day of June, 1904. That the Minister of Trade and Commerce may make such regulations as are necessary respecting the payment of the said bounty.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL.

232 McGill Street.

Montreal, June 10, 1904.

HEAVY rains throughout the country have had a somewhat depressing effect on the hardware business in general this week. Some dealers who report a slackening in trade say that it is merely temporary, and this in spite of the fact that there is still a fairly active business being done in most lines. A further increase of business is expected, as soon as the weather settles again, with a bright and active market, as has been the case recently.

The only articles in the hardware line affected by the modifications under the new tariff are cordage and glass. Upon the former the duty on British goods is increased from 16 2-3 to 20 per cent. The Canadian manufacturers are pleased, but whether it will affect prices it is not possible to state at present. The duty on British glass is decreased from 13 1-2 per cent. to 7 1-2 per cent. This is said to be a serious change, and may result in the entire exclusion of all except British glass. The discounts on both bolts and nuts have been increased by manufacturers in this country, due to American competition, the changes being noted on the list. No other change in price is reported. Shipments are coming in well, and dealers report ample stocks.

Washing Machines—Prices continue the same, with a fair amount of business being done. We quote as follows: Round (three legs), \$35.00 per dozen; round (four legs), \$39.00 per dozen; square (regular size), \$42.00 per dozen; square (smaller size), \$36.00 per dozen; round rotary, \$56.00 per dozen; square rotary, \$59.00 per dozen; "New Century," \$72.00 per dozen.

Lawn Mowers—The marvelous growth of grass during the past few weeks has had a good effect on the lawn mower business, and a big demand is the result. Prices are the same. We quote as follows: With 8-inch wheel, sizes 12, 14 and 16 inch, \$2.65 each; with 9-inch wheel, size 12, \$3; size 14, \$3.12 1-2; size 16, \$3.25 each; Philadelphia pattern, size 12, \$3.25, size 14, \$3.50; size 16, \$3.75 each; High Wheel, size 12, \$4; 14, \$4.25; 16, \$4.50; 18 \$4.75; 20, \$5.25 each.

Garden Hose—The market is strong, and a good demand is reported, in spite of the wet weather. Discounts continue: Trade, 75 per cent.; Western, 65 and 10 per cent.; White, 40 and 10 per cent.; Maroon, 40 and 10 per cent.; cotton, 60 per cent.

Hose Reels—In common with garden hose, there is a good business being done. Prices, 15 to 25 per cent. higher than last year.

Lawn Sprinklers—The demand keeps up, with prices same as before, from \$2.50 to \$18 a dozen.

Ice Cream Freezers—As mentioned last week, there is a record sale of ice cream freezers, and the demand is still very lively, although not as good as last week. We quote the following range of prices for the leading brands: One quart, \$1.50 to \$1.60 each; 2 quart, \$1.70 to \$1.80 each; 3 quart, \$1.95 to \$2.25 each; 4 quart, \$2.35 to \$2.60 each; 6 quart, \$2.95 to \$3.25 each; 8 quart, \$3.70 to \$4.10 each; 10 quart, \$4.75 to \$5.50 each; 12 quart, \$5.75 to \$6.50 each; 14 quart, \$6.75 to \$7.50 each.

Agricultural Wrenches—A moderate business is being done.

Harvest Tools—There is no new feature this week. Discounts as before, 60 per cent.

Spring Hinges—There is a brisk business being done. We quote as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—Trade is a trifle slack this week. Prices remain the same. Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Wire Coat and Hat Hooks—No great amount of business is reported. Prices continue 75c a gross for 3-inch.

Churns—Demand for churns is hardly as good as usual. Discounts, 40 and 15 per cent. f.o.b. Montreal and 30 and 15 per cent. f.o.b. factory.

Green Wire Cloth—A splendid trade is still being done in green wire cloth for the summer season. The price is as before, \$1.50 per 100 square feet.

Poultry Netting—There is a lively demand, and a good trade is being carried on. Discounts for 2-inch 19-gauge standard extras are 60 and 5; for 2-inch 16-gauge, the discounts are 55 and 5 per cent.

Galvanized Poultry Netting Staples—Business continues good. Prices are: Sizes 5-8, 3-4, 1 1-8, 1 lb. boxes, \$12.50 list; 25 and 50 lb. boxes, \$12.25 list; 100 lb. boxes, \$12 list. Less 57 1-2 per cent.

Fence Staples—No change. Prices as follows: \$3 per 100 lb. keg for galvanized and \$2.80 for bright; 25 to 50 lb. packages, 25c extra.

Bed Staples—Merely an ordinary trade being done, with no change this week. The discount on the Montreal Rolling Mills Company's and the B. Greening Wire Company's lists is 57 1-2 per cent. The discounts on the

Dominion Wire Company's list are 25 and 21-2 per cent.

Blind Staples—Trade continues the same. Discount as before, forty per cent.

Galvanized Coil Spring Wire—The demand is fair, with no change in price. Our quotations are as follows: Nos. 6, 7 and 8, \$3.20; No. 9, \$2.70; No 10, \$3.30; No. 11, \$3.35; No. 12, \$2.95; No. 13, \$3.10. Carlots 5 cents less. Freight prepaid is less than carlots to extent of 25 cents and in carlots to the extent of 20c.

Galvanized Wire—Hardly as good as a week ago, but still a fair business is being done. We quote as follows: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11 \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots 12 1-2c extra per 100 lbs will be charged.

Barb Wire—A lively trade still continues, with the supply quite ample. We quote: \$2.75 per 100 lbs. f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Carlots of 15 tons \$2.40 f.o.b. Cleveland.

Smooth Steel Wire—There is no great demand at present. We quote: Bright and annealed, \$2.50 per 100 lb. f.o.b. Montreal, Toronto, Halifax, London, Hamilton and St. John. Net extras per 100 lb are now as follows: Coppered wire, 60c; tinned wire, \$2; oiling, 10c; spring wire, \$1.25; best steel wire, 75c; bright soft-drawn, 15c; hay-baling wire, 20 to 25c.

Annealed Hay Wire—Prices and discounts continue the same, with no change in business.

Fine Steel Wire—No new feature to the market. Discounts 25 per cent., with net extras as follows: 1 and 2 lb. hanks, 25c per 100 lbs.; 1-2 lb. hanks, 37 1-2c; 1-4 lb. hanks, 50c.

Brass Wire—There is a dullness in this line at present. Discount, 60 per cent.

Copper Wire—There is a fair business being done. Discount, 60 per cent.

Rivets and Burrs—A lively trade is reported, with no change in prices. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Tinned Roofing Caps—A lively trade continues. Prices as before, 6c a lb.

Screws—The shortage that prevailed in screws for several weeks past has at last been overtaken, and now manufacturers are once more prepared to supply all sizes in any quantity. The demand keeps up well. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—Owing to American competition local manufacturers have increased their discounts, and some interesting changes will be found in quotations below. Business continues brisk. We quote discounts, as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter, and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3) list, 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 per cent.; nuts, square, all sizes, 4c per lb off; nuts, hexagon, all sizes, 41-4c per lb off.

Washers, 45 per cent. off.

Cut Nails—There is a very active trade being done in cut nails at present. The supply is fairly good. We quote as before, \$2.30 per keg, f.o.b. Montreal, Hamilton, Toronto and St. John.

Wire Nails—A brisk business is reported. The supply, which has been behind for some time, has at last caught up with the demand. We quote the following prices: \$2.40 per keg carlots and \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Pressed Spikes—There is no new feature this week. Discount as before, is 25 per cent.

Horse Shoes—Trade is reported good. Prices continue steady at former figures. Our quotations are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Shoes more than one size in a keg, 10c per keg extra f.o.b. Montreal only.

Horse Nails—An average business is being done. We quote C brand 40, 10 and 7 1-2 per cent. off list; other brands 55 per cent. off list.

Boxwood Rules—No change. Discount as before, 52 1-2 to 50 per cent. off list.

Shot Guns—Demand is increasing, but a shortage is still reported.

Cordage—A good trade is being done. Manufacturers are pleased with the increase of duty on British goods, which is changed from 16 2-3 per cent to 20 per cent. Prices continue the

same. We quote as follows: Pure manila, 15c; British pure manila, 12 1-2c; sisal, 12c; double lath yarn, 11c; single lath yarn, 10 1-2c; Russian tarred spunyarn, 13 1-2c; jute rope, 3-8-in in diameter and upwards, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply. Cotton bedcord, 90c to \$1.70, according to length. Sash cord 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Roofing Pitch—Market keeps up, and a good business is reported. Price as before, \$1 per cwt.

Building Paper—Business in building paper is quite active, and a lively demand is reported. We quote as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Firebricks—A slack trade is reported this week. English are selling at \$16 to \$22 per 1,000; Scotch at \$17 to \$22.

Cement—The demand is not very brisk at present, compared with what is usually expected at this time of the year. Prices remain unchanged at former quotations, which are: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex-cars.

PLUMBING GOODS.

Only one quotable change in plumbing goods has been made this week. Solder has declined 1-2c per lb. Iron pipe remains nominally unchanged, but for good quantities the price will be shaded slightly. Other lines are steady. General business is reported very satisfactory. The supply houses have, apparently, all the orders they can conveniently fill. City and country trade are both active. The strike in Montreal has not affected the supply business. One of the largest supply houses in Montreal said to Hardware and Metal this week that if it were not for the reports in the newspapers they would never have known there was a strike. Their city business has not suffered.

Lead Pipe—The lead pipe market is featureless. Business is brisk. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f. o. b., Montreal, Toronto, St. John, N.B., and Halifax; f. o. b. London, 15c per 100 lbs. extra; f. o. b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—Steady and fairly active. We quote discounts as follows: Light soil pipe, 3 to 6 in., 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8-in, 45 per cent. Light fittings, 2 to 6-in, 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6-in, 60 and 5 per cent.; extra heavy fittings 8-in, 45 per cent.

Iron Pipe and Fittings—Nominally unchanged, but for large orders slight concessions are obtainable. Business is

very active at present. We quote: Standard pipe, per 100 feet, in length under 19 feet—black, 1-8-in, \$2.30; 1-4-in, \$2.30; 3-8-in, \$2.55; 1-2-in, \$2.85; 3-4-in, \$3.65; 1-in, \$5.20; 1 1-4-in, \$7.35; 1 1-2-in, \$8.95; 2-in, \$12.55. Galvanized—1-4-in, \$3.20; 3-8-in, \$3.45; 1-2-in, \$3.90; 3-4-in, \$5; 1-in, \$7.20; 1 1-4-in, \$10.05; 1 1-2-in, \$12.20; 2-in, \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends, are quoted per 100 feet as follows: Black, 1-2-in, \$4.20; 3-4-in, \$5.25; 1-in, \$7.55; 1 1-4-in, \$10.55; 1 1-2-in, \$12.75; 2-in, \$17.60. Galvanized—1-2-in, \$5.25; 3-4-in, \$6.65; 1-in, \$9.55; 1 1-4-in, \$13.25; 1 1-2-in, \$16; 2-in, \$21.90. The discount on all sizes of extra heavy pipe is 12-12 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent discount and 1-2 in. to 6 in. 70 per cent. discount.

Solder—In sympathy with the decline in tin, solder has been marked down 1-2c. Bar solder is now quoted at 17 1-2c, and wire at 18c.

METALS.

Business is fairly active this week in most lines of metals, some houses apparently having all the business they can conveniently handle, and others complaining that there has been a perceptible slackening, and that the volume of trade is not so large as a year ago. Some English importers complain of delays in shipment, which are adversely affecting their business. The iron market is quiet, and owing to a lack of confidence in the future buying, is very light. Foundries evidently expect good concessions in the near future, but neither the Canadian iron men nor the importers seem disposed to cut prices yet, and nominally at least there have been no changes. Bar iron has been selling in large quantities. Copper is weaker, and the minimum price quoted below is capable of shading for quantities. Tin also is weaker, and a decline will be noted below. The minimum price is closely adhered to, except for very large quantities. Lead is also easier, and new quotations will be noted below. Zinc spelter, which has been very firm for some time, is easier now, and price quoted is probably subject to some concessions.

Pig Iron—The pig iron market is quiet at present, owing to the uncertainty of its near future. Disturbing reports from United States centres have had the effect of preventing practically all buying except for present urgent requirements. Consumers evidently expect concessions to be offered, and for the present, at all events, sellers are inclined to stand firm. It is perhaps doubtful whether any small concessions now would induce liberal buying. Sales during the last fortnight have been so light that they do not establish a market, and while there are rumors of concessions made on one order nominally

at least, there have been no changes. Hence, we again quote as follows:

"Disc," No. 1.....	\$17.50 delivered Montreal.
"Dom.," No. 1.....	13 50
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18 00 delivered Montreal.
" No. 2.....	17 50
" No. 3.....	16 50
" No. 4.....	16 00
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18 50
Glenarnock.....	20 00
Gartsherrie.....	19 25
Carnbroe.....	18 50
Carron No. 1.....	19 00
(special).....	17 50
Ayresome No. 1.....	17 50
" No. 3.....	16 90
Clarence No. 1.....	16 25
" No. 3.....	16 00

Bar Iron—Some large sales have been made recently, and the volume of general business has been up to expectations. The market is steady. We quote: Merchants' bar, \$1.75; horse shoe iron, \$2; forged iron, \$1.95.

Merchant Steel—There is a good trade this week in merchant steel. Prices are steady and unchanged. We quote: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.55; machinery (iron finish), \$2.45; square harrow, \$2.45.

Tool Steel—Trade is of average volume. We quote: Black Diamond, 8c to 9c; Sanderson's, 8 to 9c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c.

Black Sheets—Steady and unchanged. Primary markets are stronger. We quote: 28-gauge, \$2.35; 26-gauge, \$2.30; 22 to 24-gauge, \$2.25; 19 to 20-gauge, \$2.20; 8 to 10-gauge, \$2.35.

Galvanized Iron—There is an active trade this week. Prices remain as follows: 28-gauge, Queen's Head, \$4.30; Gorbals "Best Best," \$4.30; Apollo, 10 3-4 oz., \$4.30; Fleur-de-Lis, \$4; Comet, \$4; Bell brand, \$4. In less than case lots 25c extra.

Canada Plates—Remarks made in last issue still apply. The English market continues firm and seems likely to advance, but locally the old prices still obtain, as there is a strong disposition to go after business, even when there is little or no profit in it. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Sheet Zinc—The zinc market is easier this week, and the advance noted two or three weeks ago was not maintained very long. Cask lots sell now at \$6.25 to \$6.50. Very small lots cost \$6.75, but the prevailing price is in the neighborhood of \$6.50.

Zinc Spelter—Nominally the old quotation of 6c still obtains, but this price is now shaded for quantities.

Tinplates—Market firm. Cokes, \$3.75 and charcoals \$4.

Ingot Tin—The tin market has declined locally 1-2c. Local quotations are now 31 to 31 1-2c. The minimum price is pretty firmly held.

Ingot Copper—Quoted still at 13 3-4c per lb., but for quantities this price would be shaded.

Pig Lead—Market steady at a decline. Quoted now at \$3.25 to \$3.35.

Antimony—Cooksons' is quoted at 7 3-4c.

Coil Chain—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4-in, \$6.10; 5-16-in, \$4.70; 3-8-in, \$4; 7-16-in, \$3.80; 1-2-in, \$3.70; 9-16-in, \$3.55; 5-8-in, \$3.35; 3-4-in, \$3.30; 7-8-in, \$3.25; and 1-in, \$3.20 with 10c allowance on carlots.

Scrap Metals and Old Materials—The scrap market is steady at the decline noted last week. We quote: Heavy copper and wire, 10 1-2c to 11c per lb.; light copper, 9 1-2 to 10c; heavy red brass, 9 1-2 to 10c per lb.; heavy yellow brass, 8c; light brass, 5c; lead, 2 3-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$14 to \$15; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 5 to 5 1-4c per lb.

HIDES.

The chief change in the hide market was in lambskins, which advanced 25c. Other prices remain the same. We quote:

No. 1 beef hides.....	0 08 0 08 1/2
No. 2 ".....	0 07 0 07 1/2
No. 3 ".....	0 06 0 06 1/2
Lambskins.....	1 00
No. 1 calfskins.....	0 11

ONTARIO MARKETS.

Office of HARDWARE AND METAL,
10 Front Street E.

Toronto, June 10, 1904

CONTINUED activity and a steadier tone is manifested in the hardware trade this week. It is quite apparent that though the business community has decided to look into the practical workings of the new tariff proposals, that the general effect of the proposal to meet the practice of dumping with an additional duty has been to give strength to the hardware market. The buoyancy which has been a feature of the iron and steel market in recent years, has undoubtedly been succeeded by a spirit of conservative watchfulness. In fact, there has been enough talk of depression in Canada as an inevitable consequence of curtailed trading in the United States to cause some uneasiness. The budget speech of Mr. Fielding had, by allaying in some measure this uneasiness, an excellent effect. It is not likely, however, that prices will be materially influenced one way or another by the changes in the tariff for some time, at any rate.

There is practically no change in the trade being done, all seasonable lines continuing in active demand. While retailers are not disposed to buy ahead of their requirements, they are calling for a large volume of goods, orders being chiefly of a sorting nature.

Sporting Goods—Considerable business is being done in ammunition, prices keeping steady. The trade are, too, taking an interest in guns and rifles for the Fall trade. Though the bulk of the business in Summer athletic goods

has been done, there is still a fair sorting trade in the various lines.

Washing Machines—A fair trade is doing. The quotations now are: Round, reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowsell, \$36; New Century, \$72.

Oil Stove Wick—Prices are steady since the advance of about 10 per cent. last week.

Steel Track Door Hangers—We quote as follows: Steel track, 1x3-16 in., \$3.50; 1 1-4 x 3 1-16 in., \$4.50 to \$4.75.

Chain—A good sorting business keeps up. Prices are as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8-inch, \$3.85; 7-16-inch, \$3.70; 1-2-inch \$3.55; 9-16-inch, \$3.45; 5-8-inch, \$3.35; 3-4-inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Lawn Mowers—Sorting business continues fairly active. Prices are unchanged, as follows: Woodyatt, 10 1-2 inch wheel, \$8.50; Star, 9 inch, \$7; Daisy, 8 inch, \$5.75; Philadelphia, 7 1-2 inch, \$7; Ontario, 7 1-2 inch, \$15.80; King Edward, 12 inch, \$9.50 (14-inch cut in above). D. Maxwell & Sons, 10 1-2 inch, \$7.50 to \$10; 9 inch, \$5.50 to \$6.25; 8 inch, \$4.90 to \$5.50. Discount 50 per cent.

Screen Doors—A good trade is doing in this line. We quote as follows: Common, two or three panel, walnut, 4 inch, \$6.50; yellow and green stained, \$6.75; in natural colors oil finish, \$8.75, with 20c less for 3-inch style.

Screen Wire Cloth—Prices steady at \$1.50 per 100 ft.

Spring Hinges—Prices steady, as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Barb Wire—Fencing has continued later into the season than usual in some parts of the country, according to the volume of trade doing. Prices are steady. We quote as follows: \$2.75 per 100 lbs. f.o.b. Toronto and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—An excellent sorting trade in this line is reported, prices being firm throughout: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs extra charged.

Coiled Spring Wire—Sorting orders are still coming in briskly. Prices are steady. Our quotations are as follows: No. 9, \$2.70 per 100 lbs, freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65, freight allowance to 20c.

Wire Nails—A good business is reported, with prices still steady. Quotations are: \$2.45 per keg f.o.b. Toronto, with carlots \$2.40.

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.

FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.

SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

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DESERONTO, ONT.

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CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

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BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—There is not much activity. Prices keep steady, however, as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2, and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is still dull. Prices are unchanged. We still quote discounts as follows: "C" brand, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—An active demand continues. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Business keeps brisk in all sizes. Prices are firm. We quote as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—An active business is reported in all lines. We still quote: Carriage bolts, common (\$1 list), 3-16 and 1-4-inch, 60 per cent.; 5-16 and 3-8-inch, 55 and 5 per cent.; 7-16 and up, 55 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 66 2-3 and 10 per cent.

Cordage—There seems to be a general disposition to hold off for lower prices in both binder twine and cotton cordage. Whether the prices will come down or not would be hard to determine, but there does not seem to be any prospect of an advance. Sisal, 10 1-4c; standard, 10 1-4c; standard Manila (550 ft.), 11 1-4c; Manila (600 ft.), 12 1-4c; pure Manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are unchanged as follows: Pure manila, 15c; British pure manila, 12 1-2c; sisal, 12c; double lath yarn, 11c; single lath yarn, 10 1-2c; double shingle yarn, 11c; single shingle yarn, 10 1-2c; sasheord 'Hercules,' 32 to 35c; 'Star,' 36 to 38c; cotton rope, 3-16-inch and up, 20 1-2 to 22c; 5 32-inch, 25 to 27c; 1-8-inch, 25 to 28c; cotton twine, 3-ply 25 to 28c; 4-ply 32 to 34c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 63-4c; white, 11 to 13c.

Cement—Prices are steady, with a rushing trade in activity. We quote: Canadian Portland, \$1.90 to \$2.25; American Portland, \$2 to \$2.10 f.o.b. Toronto.

Firebrick—Trade in firebrick is rather tame this week. Prices are steady, as follows: We quote English and Scotch firebrick at 28 to 30c.

Tinned Sheets Tinplates Canada Plates Polished Sheets

ETC., ETC.

FROM STOCK OR FOR IMPORT.

A. C. LESLIE & CO.

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PUMPS

for every conceivable use, both hand and power.

Take a look around your town and see if any of the breweries or hotels need new pumps.

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Special pumps for acids, liquors, etc.

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NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

Building Paper—There is nothing special in the market this week. There is a good demand, with firm prices. We quote: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

PLUMBING GOODS.

Competition continues so keen that prices are being kept at a basis which leaves practically nothing for the jobber. In iron pipe some of the supply houses are doing business on a margin of 2 1-2 per cent. It would seem to be inevitable that such a state of affairs is not going to continue. It is argued, therefore, that as soon as the jobbers become tired of what must prove an unprofitable business there will be higher prices to record. Meanwhile the low figures now being quoted on iron pipe and on malleable fittings are worthy of attention. In other lines prices are nominally unchanged, but concessions are heard of from time to time. Business keeps active, as building operations are active all over Canada.

Lead Pipe—A fairly good trade is doing. No change in prices is reported. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Business continues fairly brisk. Prices are unchanged. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8-inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—Prices on malleable fittings are being cut, the discount now being from 33 1-3 to 35 per cent. A good business is being done in all lines. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 per cent.; headers, 52 1-2 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 per cent.; nipples up to 6-inch inclusive, 67 1-2 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

Iron Pipe—Price cutting has brought quotations to what seems to be the "bare rock," and a good trade is being done. We quote f.o.b. Toronto as follows: Black pipe, 1-2 in., \$1.95; 1-4 in., \$1.95 to \$2.05; 3-8 in., \$2.15 to \$2.25; 1-2 in., \$2.35; 3-4 in., \$2.95 to \$3; 1 in., \$4.25 to \$4.30; 1 1-4 in., \$5.95 to \$6.10; 1 1-2 in., \$7.15 to \$7.40; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.70 to \$2.85; 3-8 in., \$2.90 to \$3.05; 1-2 in., \$3.20 to \$3.30; 3-4 in., \$4.10

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OPERATING SIX FACTORIES.
(Daily Output 120,000.)

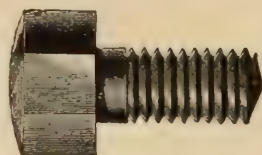
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THE RESULT OF CLOSE ATTENTION TO QUALITY FOR 35 YEARS.

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THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of
Set and Cap Screws, Special Milled Work, Engine Studs,
Etc. Cold Punched Nuts of every variety of finish.
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A Universal Tool for Farmers and Machinists



It can be used as a flat nose or burner pleyer, wire cutter, holder or splicer, screw driver, reamer, pipe grip, etc.

Forged from our finest Brescian steel and guaranteed free from defects.

Send for the Green Book of Hardware Specialties for price and description.

UTICA DROP FORGE & TOOL CO.

Mfrs. of Nippers and Pliers.

296 Broadway, New York, New York.

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SMITH & HEMENWAY CO.,

Mfrs. of Cutlery and Hardware Specialties.

New York.

ALLEN C. JENKING, Canadian Manager.

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43 and 44 Percival Street, - London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

Established 1815

ALSO
Lead Vices,
Carbon Tools,
Etc., Etc.,



Agents for Canada: A. Ramsay & Son, Montreal

to \$4.20; 1 in., \$5.95 to \$6.15; 1 1-4 in., \$8.30 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

Enameled Ware—An active business is doing. Prices are stronger, as it is held by many of the trade that the clause regarding dumping will affect importations in this line as much as any line. We quote "Standard" 5 1-2 feet rolled rim, first quality, at \$21.60; second quality, \$15.50 to \$16.

METALS.

A steady business from stock is reported by the wholesale metal houses. Not much pig iron is coming in from outside, but there is a large import business being done in sheet metals. Prices are comparatively steady on the local market. There is still hesitancy about buying pig iron in advance of requirements, but the furnace men do not seem disposed to make concessions.

Pig Iron—Prices are still weak in Canada, as well as in both Great Britain and the United States. Yet there is not much inclination toward lower prices at the smelters. We quote as follows:

Middleboro, f.o.b. Toronto		\$19 25
Hamilton, No. 1	\$18 25	to 18 50
" No. 2	17 75	to 18 00
" No. 1	17 00	to 17 25
Midland, No. 1	18 50	to 19 00
" No. 2	18 00	to 18 50
" No. 1 f.o.b. Midland	17 00	to 17 25
Radnor, f.o.b. furnaces		30 00
Londonderry, f.o.b. furnaces	17 50	to 18 00

Bar Iron—Competition for business continues keen. Prices are fairly steady. We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet by special agreement according to length and size.

Steel—Prices are steady, with an excellent trade doing. Quotations are as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10 to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—Prices are somewhat easier, the range now being from 29 to 30c. An active business is doing.

Galvanized Sheets—There is a good demand at unchanged prices. Quotations are as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tinplates—Considerable business has been done. Stocks are light. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—A fair demand is reported. A large quantity is being discharged at Montreal for delivery throughout Ontario. Prices are steady. We quote as below: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Copper—A fair trade is reported in ingot, also an excellent movement in sheet copper. We quote in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

Brass—There is a fair trade, with the discount steady at 15 per cent.

Lead—There is a good demand at unchanged prices. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—Stocks are light. Buying is active at 5.3-4 to 6c per lb.

Solder—There is a fair trade. Prices are 1-2c lower. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Antimony—7 1-2 to 8c per lb.

Old Material—We find very little change in the market this week. Trade is still easy, with prices none

too firm. We quote: Heavy copper and wire, 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 9 1-4c per lb.; heavy yellow brass, 8 to 9c per lb; light brass, 5 to 5 1-2c per lb; lead, \$2.50 per cwt; scrap zinc, 3c per lb; iron, No. 1 wrought, \$10; No. 2 wrought, \$3; machinery cast scrap, \$13; stoveplate, \$10; malleable and steel, \$4; old rubbers, 5c per lb; country mixed rags, 65c per 100 lbs.

COAL.

Considerable activity is being experienced and prices are firm. We quote: Anthracite, \$5.25; bituminous for steam purposes, \$2 to \$4, according to quality, f. o. b. Buffalo and bridges.

PETROLEUM.

A decline of 2 1-2c is noted this week, as a consequence of the tariff changes. We quote: Canadian water white, 17 1-2c; American prime white, 16 1-2c; American water white, 19c, ex-warehouse.

Hides, Skins and Wool.

Wool continues to come in well, and is in good condition. The hide market is still firm. Lamb skins have advanced 5c on last week's quotation. Prices are firm all around. We quote:

HIDES.

No. 1 green, per lb.	0 08
" 2 " "	0 07
" 1 " steers, per lb.	0 08
" 2 " "	0 07
Cured, per lb.	0 08

CALEFSKINS.

Veal skins, No. 1, 6 to 10, inclusive	9 11
" " " 2 " "	0 69
" " " 1 15 to 20 lb	" 10
" " " 2 " "	0 08
Deacons (dairies), each	0 65
Sheep skins	1 00 1 25
Lamb skins	0 35

WOOL.

Unwashed wool, per lb.....	0 10
Fleece wool, new clip, per lb.....	0 17
Pulled wools, super, per lb.....	0 18 0 20
" " extra ".....	0 20 0 22

TRADE CONDITIONS IN MARITIME PROVINCES.

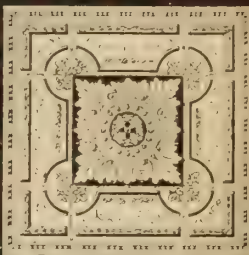
Special Correspondence of HARDWARE AND METAL

Halifax, June 6, 1901.

At the present writing the strike at Sydney shows no signs of nearing a termination, both sides apparently being determined to hold out. The plant of the Dominion Iron & Steel Co. is practically silent, and travelers have cut Sydney out of their routes for the present. The company has ample stock on hand to meet demands for current domestic requirements, and the cessation of production in the present state of the market will work no hardship. The only manufacturing interest likely to be inconvenienced will be the nail factories which, having failed to make their usual contracts for foreign rods, have depended upon the Sydney rod mill for their supply of raw material. In the interests of the entire Cape Breton it is hoped that a speedy settlement of the strike may be arrived at before the harm done is irretrievable.

**OUR METALLIC
CEILING^S AND WALL^S**

Are both artistic and serviceable.
Popularly used by practical people
everywhere.



Easily applied—most moderate in
cost—fire-proof, sanitary and won-
derfully durable—with countless
designs to select from.
Write us for booklet telling all about them.

METALLIC ROOFING CO., Limited
Wholesale Mfrs. **TORONTO, CANADA.**

Nova Scotia fishermen are having an excellent season. Several vessels arrived from the banks in the last ten days with full fares. One great drawback has been the scarcity of men. At Lunenburg there are fifteen vessels laid up, because they are unable to get crews, and several are also laid up at La Have and Mahone. The vessels on the banks are each short handed, and fully 300 additional fishermen could get immediate employment on the Nova Scotia banking fleet. The vessel owners are starting an agitation to compel the Government to make an effort to promote immigration of men accustomed to the fishing industry. The field for such is practically unlimited in this province, and no doubt many people in Europe would better their circumstances by coming here.

While there has been no change in Halifax quotations the feeling in turpentine is easier in sympathy with the outside markets. Linseed oil is steady and unchanged. Lubricating oils hold very firm. Kerosene is down one cent per gallon.

The management of the Maritime Nail Works at St. John expect to have their new factory in operation by the first of July. The machinery which arrived from England some time ago is now being installed. The plant when completed will be superior to that destroyed by the recent fire, the new machinery being of the most up-to-date kind.

The Amherst Board of Trade is in communication with the Singer Mfg. Co., of Elizabeth, New Jersey, relative to the erection of a factory at Amherst for the manufacture of sewing machines for the Canadian trade. It is understood the company is seriously con-

sidering the proposal. There have been two new factories started in Amherst since the first of the year, viz., the Decorative Floor & Tile Co., and the enamelware factory.

• • •

The new automatic railway crossing gate patented by Mr. John McGowan, of Sydney, was tested on the Cape Breton electric road on Saturday with splendid results. It worked with perfect ease, closing the highway approach as the train drew near and removing the obstruction after the train had passed. The practical test demonstrated the utility of the invention, which will be manufactured and placed upon the market at once.

— —

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of *HARDWARE AND METAL*.

Vancouver, B. C., June 4, 1904.

THERE is one industry on this coast which has great possibilities but which has not yet been exploited, though there are now some active operations which look like business. This is the pulp industry, for which great things have been hoped in the past and great predictions have been made for the future. It is self-evident that the industry should have a great future. The province has vast areas of lands which bear pulp wood, and there are in the Orient and Australia almost unlimited market possibilities. It must also be remembered that the United States paper manufacturers will ere long have to come to the Pacific Coast for their supplies of raw material.

For the past two years there have been some moves made towards the establishment of this industry, which requires large capital to put it in operation on an adequate basis. As mentioned in this column some months ago, the Government of British Columbia two years ago passed a bill which granted certain privileges to pulp manufacturing concerns. If proper representations were made, the Government would reserve areas of land from which to allow manufacturers to select pulp timbers. Two companies on the mainland and one on Vancouver Island have availed themselves of these privileges.

The operations of the Oriental Power & Pulp Co. have come more into prominence by reason of the work they have done in preparing for the establishment of a pulp mill. They have had a concession of 83,200 acres set aside by the Provincial Government, and of this 61,000 is already surveyed and under lease. The remaining 22,200 is to be surveyed, and the lease from the Government concluded at once. The company has carried out so far all the conditions attaching to leases of pulp lands. The building of the mill and other plant for producing pulp and paper is to go ahead this year, and the expectation is that by the end of two years the mill will be turning out 100 tons of news print paper per day. The cost of erecting the complete plant is placed at a million dollars, which sum the company is prepared to expend. The number of employees which it will give work to is estimated at 300. The financing is being done by the Canadian Finance Syn-

dicate of London, England, of which the Oriental Power & Pulp Co. is a subsidiary company. Col. Melles, of Aberdeen, Scotland, and Mr. Yule, of the London Stock Exchange, were here a short time ago to examine the proposition for themselves and their associates. The company's location is at Swanson Bay, opposite Princess Royal Island, and some 400 miles up the coast.

* * *

The first consignment of steel rails of any dimensions to be received in British Columbia this year was discharged this week from the steamer Hyson, of the China Mutual Line. The consignment, which consisted of 1,000 tons, was imported from Belgium, by Evans, Coleman & Evans, and half of it was for the British Columbia Electric Railway Co., for the extension of its lines to the city cemetery, two miles out from the present terminus in Mount Pleasant. The rest of the rails will be carried in stock by the importers. They were 56 lb. rails, and the steamer loaded them direct at Antwerp, before sailing from Liverpool.

The big steamer brought in 800 tons of general cargo also, and a great part of this was hardware. Outgoing she took 200,000 feet of lumber from this port and 100,000 from Victoria. Her carrying capacity is 11,000 tons dead weight, or 13,000 tons measured.

* * *

The alterations made necessary in the portion of the city known as Chinatown by the purchase of a Great Northern Railway terminus, has necessitated the Chinese seeking a fresh location. They have purchased a number of lots further west on Pender street, and will erect a regular village of Chinese buildings on the location. The buildings will be of brick, and with the usual Chinese thrift there will be every economy of space. The big Chinese firm of Wing Sang & Co., reputed to be the wealthiest in British Columbia, and easily worth over a quarter of a million dollars, has undertaken the investment. They will sublet the premises to Chinese merchants and lodging house keepers. The cost of the buildings will be \$50,000.

The Great Northern Railway, or the V. W. & Y., as its B. C. branch is known, is making rapid progress towards establishing its terminals here. The Chinatown site recently purchased has been partially cleared out already, and the bridge and trestle are nearly completed across False Creek, to admit the entrance of the railway into the city from the southeastern portion, where the line was finished some months ago. The opening of the Fraser River bridge to traffic is all that now delays the direct entry into Vancouver of the through trains of the Great Northern Railway system.

* * *

An idea of the proportions of the logging business on this coast can be obtained from the operations of the tug St. Clair, which in the past week has towed into port from points far up the coast about 3,000,000 ft. of logs. One tow, which comprised 24 "swifters," was measured at 1,700,000 feet, and the other at over 1,200,000 feet. The whole of the second tow was for the Pacific

Coast Lumber Co.'s mill. It is said that the 1,900,000 feet raft was the biggest single tow ever brought into port by a tug in British Columbia waters.

The logging industry is somewhat unsettled in direct consequence of the disturbing talk which has necessarily followed the agitation to have a duty placed on lumber entering Canada. The loggers are, of course, dependent on the mills, and if there is a chance of the mills closing down the loggers will have to close down too. As a matter of fact there is a big stock of logs cut and stored, and it is said the loggers talk of holding a meeting on June 16 to discuss closing down the camps for a while.

The whole lumber industry is very much interested in watching for the conference which is to take place in Ottawa this week, it is expected, between representatives from the Boards of Trade of Vancouver, Victoria and New Westminster, and from the British Columbia Lumber and Shingle Manufacturers' Association, and the Dominion Government, on the proposal to impose a \$2 duty on United States rough lumber, which is urged by the British Columbia delegates.

* * *

A very serious disaster, which temporarily throws 400 men or more out of work at Nanaimo, occurred on Sunday last, by which all the buildings and engine house at the pit-head of the Western Fuel Co.'s mines were destroyed by fire. Very fortunately the disaster was unattended by loss of life, as the day being Sunday the mines were not working. The City of Nanaimo is very largely dependent on the coal mining for its business support, so that this shut-down in the middle of the best season of the year is a serious matter to them. The announcement is made, however, that the work of rebuilding the burned structures and replacing the plant will go on at once, and with all possible speed. This is the second bad fire in Nanaimo in three weeks, the big saw mill of Andrew Haslam having been destroyed. He also is going ahead with rebuilding, construction having already begun.

* * *

A very excellent write-up of a local Victoria manufactory appeared in the Victoria Colonist of the 28th inst. The institution is the furniture factory of Weiler Bros., which is a very extensive concern with a large and deserved patronage. The furniture manufactured by this company is to be exhibited at a "Made-in-Canada" Fair which is to be held in the City of Victoria shortly.

* * *

The A. J. Burton Saw Co. has completed the erection of its factory in the eastern end of the city, and is now awaiting the arrival of the machinery. Raw material for the manufacture of saws will be imported direct from the Jessop Steel Co., of Sheffield, the importations being brought by the China Mutual and Blue Funnel boats. The company will only undertake the manufacture of mill saws, both rotary and band saws being made. A 50 horse power motor will furnish power for the factory. The company figures that it can save the duty on saws imported from the United States, where the bulk of the mills buy now. It is pointed out

that there is no reason why saws cannot be made as cheaply here as on the other side, and as the duty has to be paid the mills will save that much.

* * *

A reported discovery of an important vein of coal sixty miles up the coast from Vancouver, at Wulfsohn Bay, is causing a great deal of interest in the city and in Victoria. The find has been located by four hand-loggers, who were given a pointer and made some preliminary examinations. They have traced the vein for nearly three miles, and where it crops out clearest it is $\frac{1}{2}$ to 3 ft wide. The importance of the discovery is hard to over-estimate, if the coal deposit turns out to be as good as first indications would seem to suggest. The discoverers also announce that they have found petroleum on the land also. Nine square miles have been staked out, and a company is being formed to develop the property.

LONDON METAL MARKET.

From The Metal Market Report June 9.

Pig Iron—Scotch warrants, Glasgow, closed at 51s 6d (unchanged). Mid-lesboro No. 3 foundry at 42s 10 1-2d, a decline of 6d in the last week.

Tin—Spot tin opened steady at £121 10s, futures £121 17s 6d, and after sales of 370 tons of spot and 400 tons of futures closed firm at £120 17s 6d for spot and £121 7s 6d for futures, making price as compared with last week £1 5s lower on spot and 7s 6d lower on futures.

Copper—Spot copper opened firm at £56 10s, futures £56 10s, and after sales of 125 tons of spot and 100 tons of futures, closed quiet at £56 10s for spot and £56 10s for futures, making price as compared with last week 2s 6d higher on both spot and futures.

Lead—The market closed at £11 13s 9d, making price as compared with last week 5s lower.

Spelter—The market closed at £21 15s, making price as compared with a week ago 5s lower.

UNITED STATES METAL MARKET.

The New York Journal of Commerce, June 9.

Pig Iron—The deadlock in the pig iron situation remains unbroken; furnaces in the north, and in the south as well, show no disposition to deviate from the firm stand which they have taken in regard to prices. The four largest southern companies will not entertain business either for prompt shipment or forward delivery under \$9.25 Birmingham for No. 2 foundry, while the largest interest thus far has refused to shade \$9.50. The small current business that is being booked for southern is at \$9.25 to \$9.50 for No. 2, \$8.75 for No. 3, and \$8.50 for No. 4 foundry.

Northern furnaces, or rather those in Eastern Pennsylvania, refuse to shade \$13.50 for No. 2 X at the foundry, except in competition with southern iron at tidewater points, where an exception to the general rule has occasionally been met.

The round tonnages of both furnace and basic iron, which are under negotiation for deliveries during the third and fourth quarters of the year, have borne no fruit as yet, nor is any definite result expected on the basic iron until next week.

While consumers are not acting in concert—each one's course being dictated by the condition of his order books for castings or other finished materials—for the time being melters are disposed to buy only for current wants, nor is this policy likely to be departed from until indications regarding the future are more encouraging. Nothing is to be gained by commitments for large tonnages in the state of the present market or the outlook for futures.

Information from the Central West, while showing a light volume of sales, indicates that prices are being steadily held at \$12 for basic and \$12.50 for Bessemer in the valleys.

Steel—Reports regarding sales of finished steel are a little more encouraging, the aggregate volume of business in structural material, bars and rails, showing an improvement over previous weeks. Some further export business in iron and steel is also being negotiated, but, of course, at relatively low prices. Some little improvement is noted in the number and tonnage of orders for fabricated steel, structural shapes, soft steel bars and standard rails. One contract for 20,000 tons of steel rails has just come to the surface and some fair sized orders for export are under negotiation. Local contractors have secured some additional contracts for local buildings requiring several thousand tons of structural shapes. Larger sales of soft steel bars are reported in lots of from 200 to 400 tons for early shipment, aggregating 1,000 tons. One of the local independent structural mills reports orders booked in sufficient quantity to carry them through the Summer at full capacity, while the Wabash Railroad has not yet placed its contracts for structural steel. Pittsburgh reports an increased aggregate tonnage of bridge material, channels, beams and angles. The plate business is still dragging, and the competition for light rail orders continues with low prices prevailing.

Bar Iron—The increased competition for business on a dull market is responsible for concessions from the official schedule prices, but the eastern market has withstood the strain much longer than either the West or Central West. The merchant mills continue to run on short time because of light specifications. The small current business is being taken on the basis of \$1.30 to \$1.35 Pittsburgh for common bars, half extras. The light store trade continues to be satisfied on the basis of \$1.75 full extras.

Coke—The market for both foundry and furnace coke continues easy on free offerings and light demand. Offerings of 72-hour Connellsville foundry coke at \$1.75 to \$1.85, and a few sales are made at \$1.90 at the ovens. Furnace coke is easy at \$1.25 to \$1.40 at the ovens.

PITTSBURG METAL MARKET.

From The Iron Age, June 9, 1934.

Pig Iron—While the market continues quiet, yet at the same time it is true that consumers are taking more interest on account of the very low prices at which pig iron is selling. The American steel foundries are inquiring for about 3,000 tons of basic iron for reasonably prompt shipment, and have been quoted \$12 Valley, or lower. The Massillon Iron & Steel Company, operating a cast iron pipe works at Massillon, Ohio, have bought about 5,000 tons of Nos. 3 and 4 southern foundry at a comparatively low price, said to be about \$8 f. o. b. Birmingham. The inquiries of the Wheeling Mold & Foundry Company and United States Cast Iron Pipe & Foundry Company are still in the market, but neither has as yet bought. Bessemer pig iron is held at \$12 to \$12.25, Valley, or \$12.85 to \$13.10, Pittsburgh, Northern No. 2 Foundry is held at about \$12.15, valley, or \$13 Pittsburgh, for carload lots. On any large tonnage for extended delivery it is probable that \$12 would be done. Northern Forge is held at about \$11.50 Valley, or \$12.35 Pittsburgh, and we note a sale of 1,500 tons to a local consumer at that price.

Merchant Pipe—A meeting of the independent pipe mills was held in this city on Thursday afternoon, May 2, at which lower discounts on steel pipe were adopted to conform to those of the leading interest issued under date of June 1. The National Tube Company are now making deliveries on about 4,000 tons of 16 and 20-inch line pipe to the Manufacturers' Light & Heat Company, who are now laying the line. The large gas line for Kansas referred to last week has not yet been placed. The general demand for merchant sizes of pipe has fallen off somewhat, and the mills are going after tonnage more vigorously than for some time.

Coke—In sympathy with the declining market on iron and steel, prices of furnace coke are lower, and strictly Connellsville has sold at \$1.50 a ton, and in exceptional cases \$1.45 a ton at oven has been done. However, a good deal of furnace coke is being shipped on contracts, which net the seller \$1.60 to \$1.65 a ton at oven. Strictly Connellsville 72-hour foundry coke is selling at \$1.90 to \$2 to consumers. Mountain coke is selling at about \$1.40 for furnace and \$1.75 to \$1.80 for foundry, at oven. In the upper and lower Connellsville regions last week the output was about 260,000 tons, a decrease over the previous week of about 5,000 tons. The prospects are that a number of coke ovens will be banked in the near future, because of blast furnaces going out of blast within the next month.

J. G. Elliott, planing miller, Shawville, has been burnt out.

T. McNab, hardware dealer, Moose Jaw, is dead.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

BUSINESS CHANCES.

A GOOD HARDWARE, STOVE and tinware business, with tinshop, in a progressive town, about 1,000 population; stock between \$4,000 and \$5,000; good reason for selling. Address, Box 136, HARDWARE AND METAL. (24)

FOR SALE—Stock of hardware and tinware, clean and well assorted; discount off invoice prices to cash buyer. Box 139, HARDWARE AND METAL, Toronto. (25)

HARDWARE BUSINESS—About \$4,000, in largest mining town in New Ontario. For particulars address Horne & Hardy, Copper Cliff. (24)

SITUATION WANTED.

HARDWARE CLERK — (Canadian); three years' experience, wishes a position in retail store in Manitoba or N.W.T.; can furnish references if required. Apply Box 138, HARDWARE AND METAL, Toronto. (24)

SITUATIONS VACANT.

BOILERMAKERS — Mostly on new work; steady work to suitable men. R. Whitelaw, Woodstock. (f)

BRASS FINISHERS — Familiar with switchboard and other electrical work. Apply to Canadian General Electric Co., Peterboro'. (f)

HARDWARE SALESMAN — Must be first-class; state experience and salary expected. Box 307, Orillia. (24)

HARDWARE TRAVELLER—Young man with thorough hardware training to travel in North-western Ontario. Apply by letter only to H. Vigeon, Imperial Bank Buildings, Toronto. (24)

IMMEDIATELY—Horseshoer and jobber; experienced; steady job, \$2 per day. George English, Box 176, Omeme, Ont. (f)

PLUMBER — First-class. Apply Anguish & Whitfield, Brantford. (f)

TINSMITH—At once. Apply Box 134, Tavistock, Ont. (f)

TINSMITH—First-class man; take charge of shop; good on furnace work; state wages and experience. Drawer 23, Barrie. (f)

WANTED—Hardware clerk, with bookkeeping experience; young man preferred. Apply J. H. Bell, Mattawa, Ont. (24)

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL

Room 308 McIntyre Block,

Winnipeg, June 7, 1904.

SEEDING is practically all finished, and the farmers claim that the indications all point towards a good crop, even after their being held back so long by the late Spring. Trade continues good and the future prospects are very promising. The market remains unchanged. We quote:

Barbed wire, 100 lb.	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 30
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91
Annealed wires (uncoiled) 100c. less.	
Horseshoes, 40 per cent. discount.	
Horseshoes, iron, No. 0 to No 1.....	\$4 75

No. 2 and larger....	4 45
Snow shoes, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 45
No. 2 and larger.....	4 20

Cut Nails—	Wire Nails—
2d 1 in.....\$4 10	1 in.....4 15
3d Fin. 1½ in.....4 10	1½ in.....4 10
3d 1½ in.....3 75	1½ ".....3 70
4d 1½ in.....3 50	1½ ".....3 50
5d 1½ in.....3 50	1½ ".....3 50
6d 2 in.....3 40	2 ".....3 40
8d 2½ in.....3 25	2½ ".....3 25
10d 3 in.....3 20	3 ".....3 20
20d 4 in.....3 15	3½ ".....3 15
30d 4½ in.....3 10	4 ".....3 10
40d 5 in.....3 10	4½ ".....3 10
50d 5½ in.....3 10	5 ".....3 10
60d 6 in.....3 10	5½ ".....3 10
	6 ".....3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00

Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10

Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10½ oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28 ".....	4 75
Extra sheets, 36 in. wide, an advance of 25 p.c. per 100 lb.	

Genuine Russian, per lb.....	11
Imitation ".....	07 to 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 50

Tinplate, IC charcoal, 20 x 28, box....	9 50
" IX.....	11 50
" IXX.....	13 50
Ingot tin.....	35

Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 15
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50

Pig lead, 100 lb.....	5 50
Black iron pipe, ¾ inch.....	3 30
" ¾ ".....	3 30
" ¾ ".....	3 40
" ¾ ".....	3 75

Black iron pipe, ¾ inch.....	4 30
" 1 ".....	6 25
" 1½ ".....	8 75
" 1½ ".....	10 50
" 2 ".....	14 50

Rope, sisal, 7-16 and larger, basis.....	11 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrum.....	11 25
Solder.....	20

Axes, chopping.....	\$ 6 75 to 12 00
" double bitts.....	12 00 to 18 00
Bluestone.....	5 25

Screws, flat head, iron, bright.....85 and 10 p.c.	
Round " ".....	80 p.c.
Flat " brass.....	75 and 10 p.c.
Round " ".....	70 and 10 p.c.
Coach.....	70 p.c.

Bolts, carriage, 3-16 and ¾.....	60 p.c.
" 5-16 and ¾.....	55 and 5 p.c.
" 7-16 and up.....	55 p.c.
Bolts, machine, ¾ and under.....	50 and 5 p.c.
" 7-16 and over.....	55 and 5 p.c.

Bolts, tire.....	60 and 5 p.c.
Bolt ends.....	55 and 5 p.c.
Sleigh shoe bolts.....	70 p.c.
Machine screws.....	70 p.c.
Plough bolts.....	55 and 5 p.c.
Square nuts, case lots.....	3c. discount.

" " small lots.....	2½c.
Hex " case lots.....	3c.
" " smaller lots.....	2½c.

Rivets, iron.....	50 and 10 p.c.
Copper, No. 8.....	32
No. 12.....	36

Coil chain, 3-16 inch.....	9½
" ¾ inch.....	7½
" 5-16 inch.....	5½
" ¾ inch.....	5½
" 7-16 inch.....	4½
" ¾ inch.....	4½
" ¾ and ¾ inch.....	4

Spades and shovels.....	40 and 5 p.c.
Harvest tools.....	60 p.c.

Axe handles, turned, s. g. hickory, doz..	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60

Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.

Building paper:	
Anchor, plain.....	65c.
" tarred.....	70c.
Pure fibre, plain.....	67½c.
" tarred.....	80c.

Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
American R.F.....	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.

Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00

Shot, Ordinary, per 100 lb.....	6 00
Chilled.....	6 50
Powder, F.F., keg.....	4 75
F.F.G.....	5 00

Tinware, pressed, retinned.....	70 and 10 p.c.
" plain.....	75 and 2½ p.c.
" pieced.....	

Japanned ware.....	37½ p.c.
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Enamelled ware, white.....	45 p.c.
" Famous.....	50 and 10 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American	27 3/4 c.
Prime white American.....	25 1/2 c.
Water white Canadian.....	25 1/2 c.
Prime white Canadian.....	24 3/4 c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap.....	5
Copper (heavy).....	8 1/2 c. per lb.
Yellow brass (heavy).....	7 1/2 c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead.....	2c. to 2 1/2 c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead.....	\$6 00 to \$6 50
Putty in bladder, 2 1/2 lb., in keg of 100 lbs.	0 02 3/4
Turpentine, pure, in barrels.....	\$ 0 97
Less than barrel lots.....	1 02
Linseed oil, raw.....	0 52
Boiled	0 55

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 25 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine....	0 29
" " extra engine.....	0 27
" " dyna no	0 35
" " black	0 22
" " cylinder.....	\$0 50 to 0 75
(as to quality)	

Harness oil.....	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00 1/2
" " 2nd pressure.....	1 09 1/2

PERSONAL MENTION.

The Sheppard Hardware Co., who discontinued business on Dundas street about a year ago, have opened a store on Spadina avenue, Toronto.

Mr. Harold B. Greening, only son of S. O. Greening, of the B. Greening Wire Co., Hamilton, was on Tuesday married to Miss Gladys Powis, of Hamilton. Among the friends manifesting good-will to the groom were the employees of the company, whose gift was a beautiful cabinet of silverware. Hardware and Metal unites with many in extending congratulations.

Mr. C. L. Walder, manager of the Caverhill & Learmont Co. branch at Winnipeg, left for St. Louis on Tuesday last week, where he intends to spend a pleasant month's holiday going through the exposition.

Mr. F. S. Neeve, having resigned his position with the Cockshutt Plow Company, Limited, was on Saturday last presented by the Winnipeg staff with a handsome traveling cane, prior to his departure for St. Louis. Mr. W. F. Woollett made the presentation, which was suitably replied to by Mr. Neeve. —Winnipeg Free Press.

Mr. C. M. Rudel, of the Fairbanks Co., has just returned from a trip to Nova Scotia, where he has been in the interests of the firm.

Mr. J. H. Bell, of Mattawa, Ont., spent a few days this week in Montreal with his bride. Mr. Bell is one of our enterprising merchants in the north, and has lately opened up a branch store in Hayleyburg, in the Temiscaming District, where he is carrying on a large trade both in the hardware and furniture business.

Carter Bros., Picton, Ont., have bought out Mr. A. H. Illsey, general hardware dealer, who is removing to Alberta.

IMPERIAL STANDARD SCALES

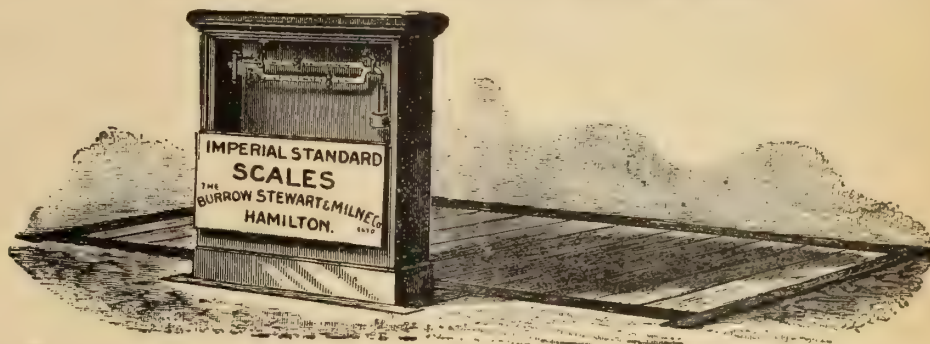
Manufactured by

The Burrow, Stewart & Milne Company, Limited

HAMILTON, CANADA.

HAY, COAL AND CATTLE SCALES

with patent cut-off lever and all the latest improvements.



Can be supplied with either single or double beam.

Size of Platform 14 feet by 8 feet 3 inches.

No. 480—Capacity 3 Tons	No. 482—Capacity 5 Tons	No. 484—Capacity 8 Tons
" 481— " 4 "	" 483— " 6 "	" 485— " 10 "
	" 486— " 15 "	

This scale can be supplied as a cattle scale with guards.

Manitoba Depot, 117 Bannatyne Street East,
MERRICK, ANDERSON & CO., - WINNIPEG

Stephens'

BARN & ROOF PAINT.

MADE WITH
MANITOBA
PURE LINSEED
OIL

The Greatest Seller in the Paint Line

Write us for new prices.

MANUFACTURED BY

G. F. STEPHENS & CO., LIMITED

170, 172, 174, 176 Market Street,

WINNIPEG, CANADA.

PAINT, OIL AND BRUSH TRADES

Names of Rosins.

NOT many people outside of the rosin market who read the alphabetical quotations know that each letter has a significance to the laborers who cut the boxes and pack the rosin into barrels for shipment. They have given each grade a name of its own, ranging from the masculine to the feminine gender, and embracing almost all the common Christian names, says the Paint, Oil and Drug Review. The only two grades that have escaped the christening of the rosins are the two top notch pales, which are known as Windowglass and Waterwhite, and are designated at the board of trade and on the bay by the abbreviated terms of WG and WW.

The other pales, mediums and commons, are thus known to the workers in the pine forests: Nancy, Mary, Kate, Isaac, Henry, George, Frank, Edward, Dollie, Betsy, Carrie and Alice.

Rosin inspectors have adopted these terms, and they are now officially quoted on the board and in the factors' office.

They also serve as a convenience in telephoning quotations, and save considerable trouble from the confusion of the sound of a similarity of the letters over the wire.

Canadian Militia Metal Polish.

The Francis-Frost Co., Toronto, are offering to the Canadian trade a metal polish which should have a large sale. Its great virtue is the real merit of the article for cleaning metals of all kinds. This polish was prepared specially for use by the Canadian militia, but is of such value that hardwaremen in all parts of the country should have a wide general sale for it.

Oil as a Munition of War.

An experiment has been carried out by the Russian Government which will, if their hopes are realized, reproduce in actual warfare one of the fictitious of the novelist, Jules Verne. His submarines and airships are already being embodied in practical form, and now the device of setting a moated town on fire by means of floating naphtha is about to be realized. According to a Reuter telegram the experiment referred to suc-

ceeded so far as to burn a small bridge in the manner indicated. The substance employed appears to resemble the Greek fire of the ancients in its appearance and effects. It is expected to be of use in preventing the crossing of rivers.

Turpentine Market Dull.

Naval stores yesterday showed the same tendencies they have for several days past, spirits continuing on the downward course, followed since the close of last week, while rosin held firm at top quotations. Weakness in turpentine at Savannah was reflected here, the price for machine barrels dropping from 57c on the previous day to 56 1-2c asked. The demand was weaker than in some time past, and only a jobbing business was done. Offerings of spirits to arrive were restricted, and it was not thought they were obtainable much under the spot price. The Savannah market was quoted at 52 1-2 to 52 3-4c.

The following comparative statement from the Savannah Board of Trade circular shows the movement of spirits tur-

pentine at Savannah for the week ending June 4, and for the month of May:

	1904.	1903.
	Spirits.	Spirits.
Receipts on hand April 1, 1903...	6,495	1,241
Received this week	6,261	6,051
Received previously	31,972	38,767

Total supply	44,728	46,059
Shipments—		
Foreign	9,990	16,035
New York	9,895	9,146
Sundry places	14,204	14,359

Total shipments	34,089	39,540
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Stock remaining	10,639	6,519
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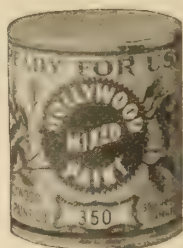
Movement for May :		
	1903.	1904.
	Spirits.	Spirits.
Stock on hand April 30	5,250	5,138
Receipts	21,395	21,209

Total supply	26,645	26,347
Shipments—		
Foreign	4,490	8,950
New York	4,501	4,216
Sundry places	6,962	8,127

Total shipments	15,953	21,293
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Stock remaining May 31	10,692	5,054
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Foreign clearances—British steamer Tontallon, Hamburg, 2,000 bbls spirits. —Commercial Bulletin, N.Y., June 8.



You can get Paint at almost any price. This does not apply to Hollywood, as it is fixed in price as it is in quality.



Being designed to give entire satisfaction to the most critical customer, it is as low in price as it is possible to get a thoroughly reliable article.

Hollywood Paste, Ready-Mixed and Floor Paints

They wear on the job, not off it.

The Imperial Varnish & Color Co.

LIMITED,

TORONTO, ONTARIO, CANADA.

If You Buy

Varnishes Paints
 Japans Colors
 Lacquers Glues
 Stains Bronzes
 Fillers Chamois
 Sponges

WRITE TO

R. C. JAMIESON & CO.

LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.

Look Out!

When you buy Green just examine the label and be sure that it reads and looks like this:



That's your safe-guard. It means that the purest, most economical and durable paint in the world is

LUCAS

Imperial French Green

JOHN LUCAS & CO.

PHILADELPHIA

NEW YORK

CHICAGO

McArthur, Corneille & Co., Montreal.



SEND FOR
 ILLUSTRATED CATALOGUE

OPERATING:

Boeckh's Toronto Factories

Bryan's London Factories.

Cane's Newmarket Factories.

MONTREAL BRANCH: 1 and 3 DeBresoles St.

Every Painter Knows The Dealers

Who handle the best lines of Paint Brushes, and they will invariably gravitate thitherward. It is all-important that you should handle the best line of goods to secure this trade.

BOECKH'S STANDARD PAINT BRUSHES

are unquestionably the best because they are made of the best material, by the best workmen and on the most scientific principles, therefore they cannot help being ABSOLUTELY THE BEST.

They wear best and please the painter the best.

UNITED FACTORIES,

LIMITED.

Head Office: **TORONTO, Ont.**

LONDON BRANCH: 71 Dundas St.

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL.

232 McGill Street.

Montreal, June 10, 1904.

GENERAL business in paints and oils pursues the even tenor of its way, and there are no special features which call for remark. The paint and oil business has been very little affected by Mr. Fielding's budget. Few, if any, changes were expected, and consequently there has not been the same speculation and excitement as in former years. Stocks of all kinds seem to be ample, and orders are being filled promptly. We quote:

Ground White Lead—Best brands, Government standard, \$4.50; No. 1 \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100-lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100-lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25-lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

Putty—Bulk, in barrels, \$1.40; in 25-lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

Orange Mineral—Casks, 7c; 100-lb kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4; in 100-lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 85c per gallon; 2 to 4 barrels, 84c per gallon. Smaller quantities than barrels, 90c per gallon. Standard gallon of 8.6 lbs.

Linseed Oil—Raw, 1 to 4 barrels, 43c; 5 to 9 barrels, 42c; boiled, 1 to 4 barrels, 46c; 5 to 9 barrels, 45c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in wholesale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb drums, 15c; 25-lb drums, 15 1-4c; 1-lb packages, 16c; 1-2-lb packages, 18c; 1-lb tins, 17c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb drums, 15c per lb; 25 lb drums, 15 1-2c; 1-lb paper boxes, 16c; 1-lb tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

Ontario.

Office of HARDWARE AND METAL.

10 Front street east.

Toronto, June 10, 1904.

ACTIVITY in all lines continues, particularly in mixed paints, varnishes, sundries, dry colors and white lead. Turpentine is dull in comparison to other lines. Some dealers seem to be looking for lower prices, but it is held by some of the shrewdest authorities that the day for low prices on turpentine is gone, their argument being that the pine has been and is still so valuable that the depletion of the forests is bound to keep the production well within the supply, and to keep prices up. Linseed oil, on the other hand, is at the lowest point probable for some time to come. One result of this is considerable speculative buying, in anticipation of higher prices. Inasmuch, however, as linseed oil is offered on the British market at the present low basis of values, and for delivery as far ahead as August, speculative buying is not altogether justified by the situa-

tion. Prices are comparatively steady at present.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb and upwards; 1-2c per lb extra will be charged for 12 1-2-lb packages; genuine dry white lead, in casks, \$4.50.

Red Lead—Genuine in casks of 560 lb, \$4.25; ditto, in kegs of 100 lb, \$4.50; No. 1, in casks of 560 lb, \$3.75 to \$4; ditto, in kegs of 100 lb, \$4.25.

White Zinc—Genuine, French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5-gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon; No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 41c; boiled, 44c; 5 to 9 bbls, raw, 40c; boiled, 43c. Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points. Another quotation is: Raw, 1 to 4 bbls, 42c; boiled, 45c; 5 to 9 bbls, 41c; boiled, 44c; 10 barrels and over open, ex-Toronto, 2 per cent. off 30 days.

Turpentine—Single bbls, 81c; 2 to 4 bbls, 80c; 5 bbls and over, f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls, 84 1-2c; 2 to 4 bbls, 83 1-2c; 5 bbls, and over, open ex-Toronto with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5-



Send us a post card
and let us tell you
all about them.

TRADE WINNERS.

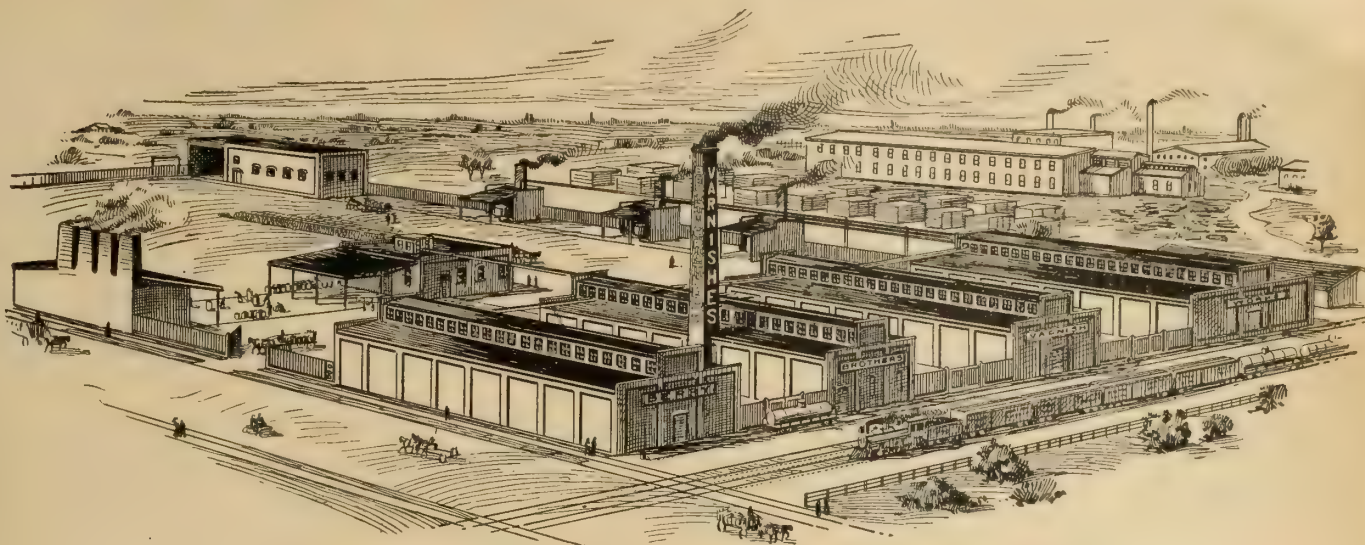
That's what you'll find

ANCHOR and ENGLISH LIQUID PAINTS

They not only win trade, but they hold it.

They are the only ready-mixed paints made in Canada that contain **Brandram's B. B. Genuine White Lead**—standard of the world.

HENDERSON & POTTS, Limited, Halifax.
HENDERSON & POTTS CO., Limited, Montreal.



IT IS NEARLY
HALF A CENTURY

since we commenced to make Varnish. During this period we have acquired a knowledge not only of Varnish, but of the varied needs of varnish consumers that nothing but time can impart, and have also learned how to cater successfully to every varnish want.

Our experience belongs to those who use and sell Berry Brothers' Varnishes.

Safest goods to handle, surest and most reliable goods to use.

WRITE FOR CATALOGUE.

Berry Brothers
LIMITED

WALKERVILLE, ONT.



STOVE PIPE VARNISH

BRILLIANT BLACK IN STONE
BOTTLES—TWO SIZES—PACKED
IN BARRELS.



STOVE PIPE ENAMEL

IN LEVER-LID TINS—FOUR SIZES.



STOVE PIPE VARNISH

"CRYSTAL BLACK"—ONE SIZE—
LEVER-LID TINS, WITH BRUSH
ATTACHED.
A HANDY PACKAGE.



STOVE PIPE ALUMINUM

FOR SILVERING ALL METALS—
SIX SIZES—

Consult the Catalogue and
kindly order early.



THE
CANADA
PAINT
COMPANY
LTD

gallon packages, 50c and 10-gallon packages 80c will be charged.

Glues—Broken sheet, in 200-lb bbls, 8 to 8 1-2c per lb; cabinet glue, in bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100-lb kegs, \$1.85; bulk in barrels, \$1.45; bulk, less than barrels and up to 100-lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per bbl.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per pound, and 8 1-2 to 9c for single tins.

English Paris Green—Petroleum bbls, 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100-lb drums, 14c; 1-lb packages, 15c; 1-lb tins, 16c; 1-2-lb tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls, 13 3-4c; arsenic kegs, 14c; 50 and 100-lb drums, 14 1-2c; 1-2-lb tins, 18 1-2c.

St. John, N.B.

There is little to report. The low price quoted in burning oil continues, with good sales for the time of year. Lubricating oils are firm; Spring sales are over, and business is rather quiet. Paint oils have rather less attention, and low values rule. In fish oils, stock is very light; new oil will come on a bare market; it is thought, however, prices will be rather lower than last Fall. In fine Newfoundland cod liver oil for medical purposes there will be a very much lower price quoted; the market is already off.

Window Glass.

MONTREAL.

Trade is fairly active. Interest centres on the tariff changes, but it is perhaps too early properly to estimate the effect. Importers of Belgian glass are hard hit, and it seems likely that the increased preference will throw the bulk of the business into the hands of the British importers. We quote: First break, 50 feet, \$1.70; second break, \$1.80 for 50 feet. First break, \$100 feet, \$3.25; second break, \$3.45; third break, \$3.95; fourth break, \$4.20.

TORONTO.

Business is fairly active in window glass, and is good in plate and ornamental glass. We quote nominally as follows: Star, first break at \$3.30 per 100 feet and Double Diamond, first break, at \$5.10. Discount, 15 and 20 per cent.

Painting by Wholesale.

"A FEW years ago all sash and door manufacturers had to paint the product of their factories piece by piece, by hand, and now they are trying to perfect a system whereby a whole carload of doors can be given their priming coat at once," said a paint salesman to a reporter. "At first each sash was gone over by a workman and then the paint could not be brushed into every part of the sash or door, while now the larger firms use large tanks into which a man lowers the entire door into the liquid, which reaches every part of it in a fraction of a minute."

"I believe before long a plan will be perfected whereby an entire carload of doors or sashes can be immersed in the paint at once. A method employed extensively now is to paint the material with air pressure, forcing the liquid through a hose. This does a thorough job, and while there is a loss in the quantity of paint used, there is a much greater gain in time."

"Modern inventions like these which cause such radical and far reaching changes in the expense account of a large factory are what put the smaller concerns at a disadvantage, owing, sometimes, to the expense of installing the system."—Paint, Oil and Drug Review.

Trade Enquiries

Government Enquiries.

The names of the firms making these enquiries, together with their addresses, may be obtained from the Department of Trade and Commerce, Ottawa, by quoting office under which the enquiry appears and giving number.

CANADIAN HIGH COMMISSIONER, LONDON.

79. An English firm manufacturing cast iron and other pipes of a special type, desire to get into touch with Canadian users of such goods.

80. A machine tool maker is anxious to get his goods brought to the notice of likely importers in Canada.

84. A Welsh firm of wire rope manufacturers are desirous of securing the services of a representative or buying agent in Canada.

CURATOR, CANADIAN SEC. IMPERIAL INSTITUTE.

49. A firm in Liverpool possessing a considerable outlet for corn oil would like to hear from Canadian producers of the article in a position to compete in the European market.

51. An application has been received for the names of Canadian shippers of tallow.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size. Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street.

The Quickest
Selling Metal Polishis the usual remark of the trade
when you ask them about**SOLARINE**It satisfies or your money back.
Write for sample order.**SOLARINE DEPOT, TORONTO.**

GENUINE

**PRATTS ASTRAL
LAMP OIL**Sold in all countries and recognized as the
highest grade oil manufactured.

WHOLESALE ONLY.

THE QUEEN CITY OIL COMPANY, Limited,
TORONTO, ONT.**McCaskill, Dougall & Co.****Manufacturers**

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES

MONTREAL.**GLUES**of every kind, and for every purpose. Our glues enjoy
large sales in almost all countries of the world, and our
brands are generally to be seen amongst good stocks of
glues. We believe we are giving better value than any other manufacturer, and we
want to submit our lines to the Canadian test. Samples gladly sent in reply to
enquiries.**GROVE CHEMICAL CO. Ltd.,** Appley Bridge,
Lancashire, Eng.**We Have the Glass You Want**

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, LimitedTORONTO MONTREAL LONDON
OTTAWA WINNIPEG.**We Wouldn't Spend
the Money**it costs to advertise "Island City"
Paints and Varnishes if they were the
kind you handle only once. It wouldn't
pay. But if we can get you started your
customers will insist on your repeat
orders. Your trade will grow and so
will ours.

Temporary Toronto Premises at 23 Scott Street.

P. D. DODS & CO., Montreal, Toronto, Vancouver**Standard Metallic Paints.**ESPECIALLY ADAPTED FOR PAINTING BARNs, ROOFS, FENCES, FACTORIES,
ELEVATORS, BRIDGES, ETC.

Sold in the Dry Form, in the Paste Form, and in the Liquid Form, and are put up in any sized packages, from a quart to a barrel.

THESE METALLIC PAINTS ARE 97% IRON.

The Liquid and Paste Paints are Ground in Pure Linseed Oil.

NONE OTHERS SO GOOD.

WRITE FOR PRICES.

STANDARD PAINT & VARNISH CO., Limited
WINDSOR, ONTARIO.

STOVES AND TINWARE.

NOTES OF THE STOVE TRADE.

By Argus.

BURROW, STEWART & MILNE, Hamilton, have several new designs of cooking stoves and heaters ready for the next season's trade. They hope to have their catalogue ready for the trade by the 21st June. In every way they expect to be in readiness for a Fall business in excess of former years.

* * *

The D. Moore Co., Hamilton, continue to expand. For four years they have made an addition to the works each year. This season the addition is to their moulding department, which was enlarged last year, though not sufficiently to cope with the present demands of the business. The capacity of the works is now about double that of three or four years ago. The cause of the steady increase in business is ascribed largely to the specialties made each season. Many improvements in design are noted this year, at least four absolutely new ranges being ready to put on the market. A catalogue showing in attractive manner all the new designs will be ready for distribution early in July. In the meantime, a booklet advertising their ranges will be sent out.

* * *

The Gurney-Tilden Co., Hamilton, expect to have their catalogue ready for the trade by July 15. It will contain many new designs, some of which are particularly likely to interest the trade. This firm have been inconvenienced for some time by a lack of room for their business offices, and are making alterations to about double their office room. Their connection in the Northwest is proving a valuable asset to the firm. Their Winnipeg branch was opened in 1883, and in the years that have intervened they have steadily increased their connection there. J. W. Martin, their Winnipeg representative, who is now visiting in Hamilton, is as ardent a believer in the West as any Winnipegger, which is saying a great deal.

* * *

"It is the unexpected that happens." Several manufacturers were complain-

ing to the writer early this week about the "dumping" of United States stoves in Manitoba and the Northwest, and at least two of them were confident that the Government did not intend to offer any assistance to the Canadian foundrymen in meeting this competition. Needless to say, they, like other Canadian foundrymen, are glad that the unexpected did happen.

* * *

The hardware and stove dealer should be busy these days preparing for stove business. A good suggestion has been made to the writer, that the hardware dealer should start to make a list of everyone likely to need a stove when he gets in his new designs in the Fall. He should instruct every clerk in the store to be on the alert for names to add to the list. Then, when advertising matter is supplied by the stove manufacturer, he will be in the position to use it to best advantage.

* * *

The proposition made by the Pedlar Roofing Co., Oshawa, Ont., has just been explained to the writer. It is one that should interest every hardware dealer who is striving to build up a permanent trade. This firm have a good thing to offer, and intend to make a selection of agents, choosing the best firms only.

Tin in Alaska.

The outlook for tin mining in Alaska has improved considerably within the past few months. Lode tin has been found in the Lost River district, about thirty miles east of Cape Prince of Wales. The tin occurs in dyke of granite, traversing limestone. Prospecting is now going on in the locality, and the outlook appears to be good. The reconnaissance work of the U. S. Geological Survey shows that the district of tin in Steward Peninsula is wider than was supposed, although the occurrence of placer tin has only been found in the creeks at York, and in the valley of the Snake River, a hundred miles east of York, and about twenty miles inland from Rome.

Subscribe to the

OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish, Chemical and Drysaltery Trades.

Subscription, \$2.00 per year from date.
Sample for 10 cents.

SCOTT, GREENWOOD & CO.
19 LUDGATE HILL - LONDON, ENG.



COVERT MFG. CO.
West Troy, N.Y.

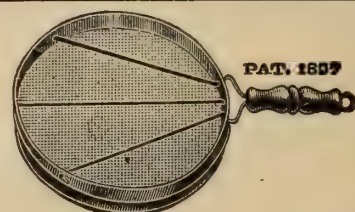
Auto Screw Jack

Harness Snaps, Chain, Rope and Web Goods, etc.

FOR SALE BY JOBBERS AT MFRS. PRICE.

PRIEST'S CLIPPERS

Largest Variety.
Toilet, Hand, Electric Power
ARE THE BEST.
Highest Quality Grooming and
Sheep-Shearing Machines.
WE MAKE THEM.
SEND FOR CATALOGUE TO
American Shearer Mfg. Co., Nashua, N.H., USA
Wiebusch & Hilger, Limited, special New York
representatives, 9-15 Murray Street.

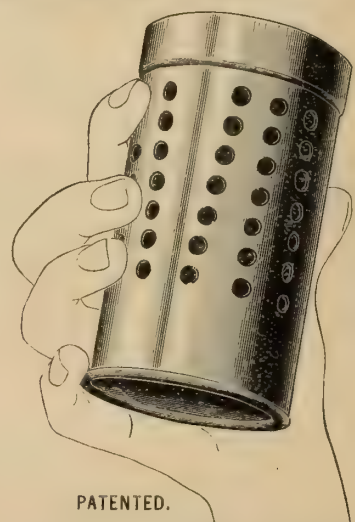


The FAIRGRIEVE GAS TOASTER

Retails at 25c. The only Toaster guaranteed to toast on gas, gasoline or blue flame oil stoves without taste or smell. Write for prices.

THE FAIRGRIEVE MAN'FG. CO.,
295 COLLEGE ST., TORONTO.

U. S. Branch: 289 Jefferson Ave., DETROIT
Agents for Great Britain: Heine, Solly & Co., Sutton
House, 2 Old Street, London, E.C.



PATENTED.

No. 2 Tin Soap Shaker.

Manufactured by

E. T. Wright & Co., Hamilton, Canada.

Have you
tried it?

Tried what?

**SELLING
MANTELS.**



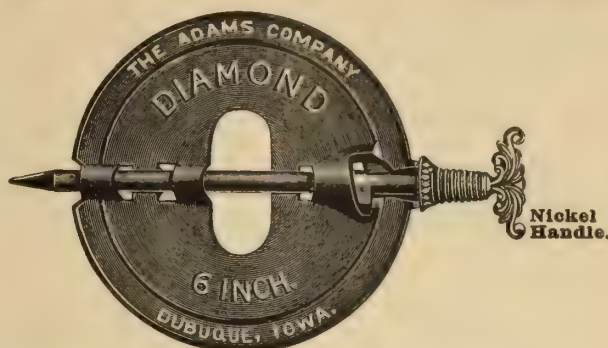
This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

DIAMOND STOVE PIPE DAMPER.

U S. Patent June 25th, 1895

Canadian Patent December 14th, 1893



Made by
THE ADAMS COMPANY, Dubuque, Iowa, U.S.A. **TAYLOR-FORBES CO., Limited**, Guelph, Ont.

P-H

Trouble with your Nipples and Couplings?



Then you are not using P-H goods.
We installed Special New Machinery for making Nipples—not just
common Nipples—but perfect goods. All our Nipples are made from P-H
Crown Pipe and not from scrap.

PIPE THAT IS PIPE

WRITE FOR CIRCULAR PRICE LIST.

Page-Hersey Iron & Tube Co., Limited, Guelph, Can.
MAKERS OF WROUGHT IRON PIPE

The Arctic Ice Chest



Made in three sizes—

No. 20.....	19 x 13¼ x 13¼
No. 30.....	23 x 16 x 16
No. 40.....	27 x 19¼ x 19¼

Refrigerator Made on Scientific Principles.

Handy and Compact.

Lined with Galvanized Iron.

Japanned in Oak and Ornamented.

Silver-Plated Tap.

Suitable for Yachts, Picnic Parties, Summer Residences, etc.

**A Boon in the Sick Room. Keeps the food for the
invalid Fresh and Sweet at all times.**

PRICES ON APPLICATION TO

The THOS. DAVIDSON MFG. CO. Limited, ... MONTREAL.

HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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Secretary—J. Thorpe Blyth.

A Canadian Plumbers' Paper.

AT the inception of Hardware and Metal it was recognized that this paper could not be of full value to its constituency, the hardware and metal-working trades of Canada, unless considerable space and attention were given to plumbing and heating matters.

From the first issue, therefore, an important feature of the paper has been the section devoted to plumbing and heating. Probably the most valuable feature in this connection has been the market reports. A weekly report, giving, in addition to the current fluctuations in prices, an intimation of changes likely to occur, has been found of great value to many of our readers. Several times subscribers have cited cases where, by taking advantage of information given in these reports, they have been able to save many times the cost of the subscription.

Another feature which many of our readers have found of much value to them has been the reports of building operations in all parts of Canada. Our facilities for securing this information have steadily improved, until to-day these reports have been recognized as one of the most valuable issued in the Dominion.

From time to time attention has been paid to the technical phase of the plumbing and heating trades. Recognizing, however, the growing importance of this department of the trade, Hardware and Metal has made arrangements for the insertion of some excellent articles along this line, with full confidence that they will meet with the full appreciation of our subscribers.

Inasmuch as Hardware and Metal is the only paper covering the Canadian plumbing trade, and inasmuch as the great majority of the plumbers of the Dominion are subscribers to it, there is every reason why the paper should be full of technical information, if the co-operation of the readers can be secured. This is the great desire of the publishers, who realize that in thus improving the paper it would be made of even more value to its readers than it is at present.

Suggestions, advice, criticisms are requested. These will receive serious and full consideration, and everything possible will be done to make the paper more interesting and valuable. The services of the editorial staff of the paper are at the disposal of our readers in any reasonable way, and any necessary expense of time or money will be entailed to make the paper as valuable to its readers as possible.

The U. S. National Association.

The sixteenth annual convention of the National Association of Master Steam and Hot Water Fitters will be held at the St. Charles Hotel, Atlantic City, N. J., on Monday, Tuesday, Wednesday and Thursday, June 13, 14, 15 and 16. Members who have matters to lay before the Trade Relations Committee should bring them to the attention of Chairman Stewart J. Jellet, 245 North Broad street, Philadelphia, Pa., or, on

June 13, at the convention headquarters. The board of directors will also hold a meeting at the convention headquarters on June 13, where any matters may be brought to their attention that have not been laid before Elias D. Smith, chairman of the committee, at 260 West Broadway, New York.—Metal Worker.

Plumbing and Heating Notes.

Bert. Hamilton, of Hamilton & Scott, St. Thomas, Ont., is to be married on June 15.

Purdy, Mansell & Co., Toronto, have one of the best jobs of the season in the contract for heating the School of Practical Science, Toronto.

Fred. H. Leigh, plumber, St. Thomas, has been compelled to take a vacation, owing to poor health. His friends hope to see him around again in a few days.

Walter Braybon, formerly with the Bennett & Wright Co., Toronto, has returned from Edmonton, N.W.T., where he was in charge of the plumbing department of Ross Bros., hardware dealers, etc. Mr. Braybon will probably remain in Toronto.

Arrangements are being completed to have natural gas for light and heat brought into Niagara Falls, Ont. Cole & Murray and G. H. Clarke & Co., hardware dealers, of that town, are anticipating its arrival by installing in their stores large stocks of fixtures.

A Toronto traveler, home from a trip through Western Ontario, says that many of the trade are waiting to hear the latest fish stories. He also says that Ben. Noble and Tommy Rich, of Smith Bros. & Co., London, should be able to "start the ball rolling" with a good yarn.

The monthly meeting of the Toronto Association will be held on Monday next. Among the matters for discussion are the appointment of an entertainment committee to make arrangements for the national convention. The baseball team will probably be organized. It is said that among those who have been nominated as captains are F. Maxwell, Geo. Clapperton, J. Fullerton and J. J. MeKittrick.

A VARNISH SUCCESS

Here's a line to bring you good returns, handsomely put up in lithographed cans, a great varnish for the general public and the painter as well. The price is low, the quality high.

RAMSAY'S KAURINE VARNISH

is the result of careful study at our varnish works. It is particularly a fine interior varnish. It will do its work to satisfaction and we sell it on our guarantee. The price is very reasonable and it yields a good profit.

Packed in handy cases.

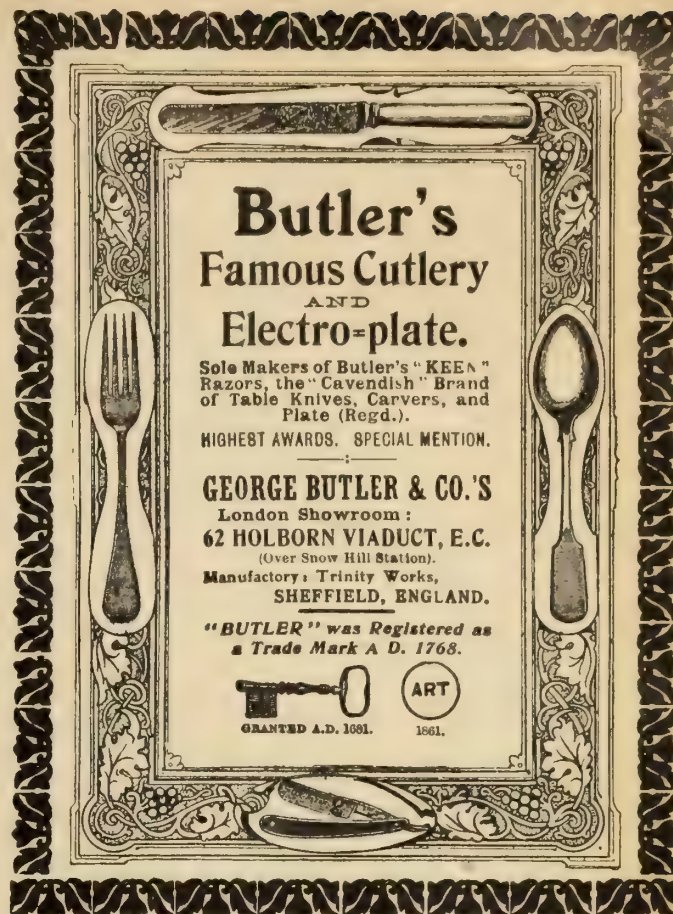
A. Ramsay & Son,

MONTREAL.

EST'D
1842

VARNISH
MAKERS






Butler's Famous Cutlery AND Electro=plate.

Sole Makers of Butler's "KEEN"
Razors, the "Cavendish" Brand
of Table Knives, Carvers, and
Plate (Regd.).

HIGHEST AWARDS. SPECIAL MENTION.

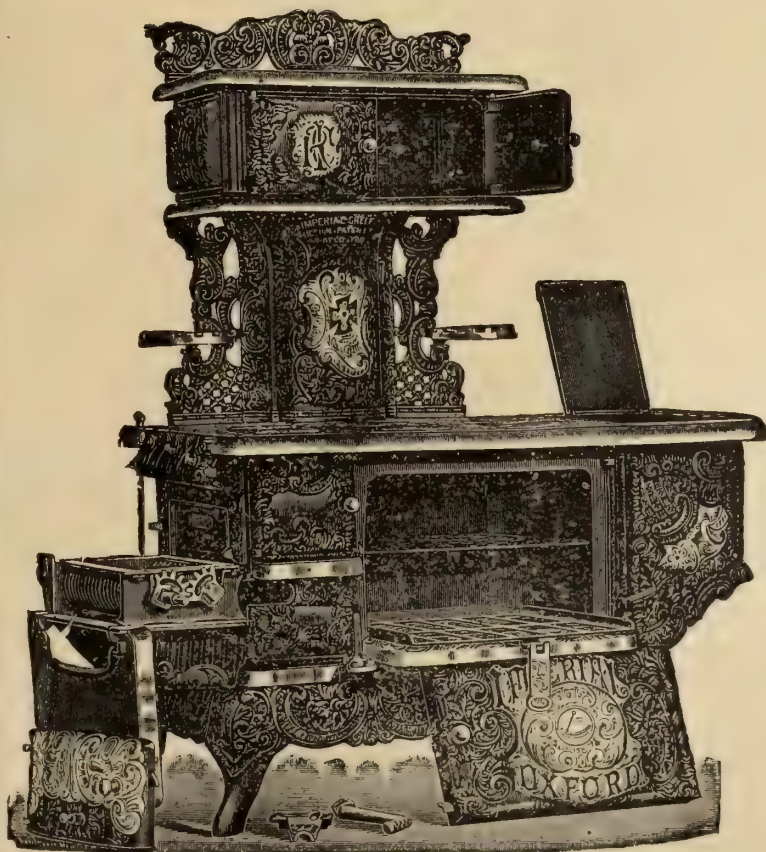
GEORGE BUTLER & CO.'S
London Showroom:
62 HOLBORN VIADUCT, E.C.
(Over Snow Hill Station).
Manufactory: Trinity Works,
SHEFFIELD, ENGLAND.

"BUTLER" was Registered as
a Trade Mark A.D. 1768.



ART

1861.



Are You Wasting Energy?

There is a lot of good salesmanship lost in trying to sell a poor article. Haven't you found it so?

Now it takes very little pushing to sell an

Imperial Oxford Range

All our agents tell us so. Most people know the Imperial Oxford before they decide to buy a range. Our advertising and their neighbors have told them the virtues of the Imperial Oxford and they naturally feel that is the range they want.

Would you like to represent us for your district? Write for particulars.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., LIMITED
CALGARY, ALTA.

Building Permits.

TORONTO.

R. Parker & Co., additions to dye works and stable, to cost \$4,000.

A. Nelson, two dwellings, Euclid avenue, \$3,500.

Mrs. Coles, a brick store, Yonge street, \$12,000.

A. C. Mabry, a dwelling, Broadview avenue, \$3,000.

Ada M. Conibear, dwelling, Hogarth avenue, \$1,200.

Thos. E. Earles, dwelling, Lippin avenue, \$2,000.

Hon. Justice Anglin, residence, St. Joseph street, \$4,000.

Merchants' Dying & Finishing Co., and Garside & White, two warehouses, York street, \$50,000.

G. T. Webb and V. F. W. Dunn, two dwellings, Pearson avenue, \$4,000.

Stanyon Metallic Furniture Co., warehouse and office, Niagara street, \$3,000.

MONTREAL.

Alf. Dago, 252 Dufferin street, building, to cost \$1,100.

Mrs. Lisa Reber, 270 Maisonneuve street, house, containing three dwellings, \$4,000.

E. Pelletier, Dorion street, three dwellings, \$2,500.

Mrs. M. L. Cadieux, 134 Mitcheson street, house, \$600.

J. H. Demers, Moreau street, house, \$1,500.

Chalmers Church, corner of St. Lawrence and Prince Arthur streets, alterations on church, \$2,000.

L. T. Brodeur, 34 St. Hubert street, building, \$600.

A. H. Laverdure, 190 Panet street, alterations on one two-storey building, to cost \$1,500.

BRANTFORD.

Permits issued in Brantford during May are:

Jos. H. Ham, double brick dwelling, Sheridan, \$2,600; also brick dwelling, same street, \$900.

George Hutton, brick dwelling, on Spring street, \$1,475.

Geo. H. Wilkes, double frame dwelling on Dalhousie street, \$1,450.

Hugh R. Thompson, brick dwelling, Terrace Hill, \$1,000.

Joseph Wilson, brick shop, Erie avenue, \$1,400.

Oscar Sav's, brick house, Ontario street, \$1,800.

Malcolm Robertson, brick dwelling, Hawarden avenue, \$1,400.

F. W. Durst, brick dwelling, Brighton Row, \$1,300.

W. G. Colmer, brick residence, Oxford street, \$1,300.

Norman Maynard, brick dwelling, Ontario street, \$1,450.

E. W. Merrill, extension to brick building, Colborne street, \$1,500.

D. Campbell, two brick houses, Cayuga street, \$1,200 each.

J. J. Fisher, brick house, Darling street, \$1,200.

Building Notes.

A public hall is to be built at Thorn-town, N. B.

Work has been commenced on the new St. Luke's Church in Winnipeg.

A new collegiate is to be erected in Portage La Prairie; the site is now being chosen.

A new Methodist church is to be erected in South Woodslee, near Comber, Ont.

The First Baptist Church, in Winnipeg, is to be extended and improved at a cost of \$30,000.

A two-roomed school house is being erected for school section No. 9, Nottawa. John Wilson, Collingwood, Ont., is the architect.

Dr. Graham Hull will erect a handsome row of brick stores on Main street, Ottawa. The cost will be \$20,000.

A. & W. Melville, architects, Winnipeg, have prepared plans for the transformation of the Assiniboine block, in Winnipeg, into a modern hotel building for McLaren Bros.

A movement is on foot in Ottawa to form a joint stock company, with the point in view of building in Ottawa one of the finest athletic structures in the Dominion. It is intended to expend from \$10,000 to \$12,000.

The Dignum & Monypenny warehouse, destroyed in the recent Toronto fire, will be rebuilt at once, at the corner of Bay and Wellington streets. The new building will have a frontage of 32 feet, and a depth of 110 feet, and will be five storeys high.

A complete set of chimes is being installed in the tower of the St. Louis de France Church, at the corner of Roy street and Laval avenue, Montreal. Iron columns are being put in to support the set, which consists of about a dozen bells.

The village of St. Esprit now possesses a fine new church, which has just been completed at a cost of \$50,000. It is 50x150 ft., and will seat 800 persons. The building is of cut stone, and in the interior finish asbestos plaster and merisier rouge wood are used.

During the month of May 108 building permits were issued in Montreal, to build in all 92 houses, containing 132 dwellings, the total cost of which amounted to \$664,395. There were 86 permits granted for alterations to 114 dwellings and 27 stores, representing a cost of \$92,985.00.

The contracts for the masonry and excavating, the carpentering, the plastering and the metal work, in connection with the four-roomed addition to the Avenue school, Toronto Junction, have been awarded. The question of heating apparatus has been held over. The lowest tenderer was the Pease Foundry Co. The contract for plumbing will not be let.

A. R. Denison, architect, Toronto, is complaining of the delay at the City Hall in passing plans of buildings. He says that it should only take a few days to pass the plans, while those of the W. R. Brock building, and of the Dignum & Monypenny warehouse, had been there for fully a week before they

were passed. This delay had caused him considerable inconvenience in respect to labor.

The Catholic parish of Maisonneuve, has decided to spend \$125,000 in the erection of a new church.

The congregation of St. Cyprian Church, Toronto, have decided to erect a new church.

Canadian Plumber Gives a Reason.

IN reply to an inquirer asking the necessity of venting traps, Fred. H.

Trainor, Charlottetown, P. E. I., gives the reason as follows: "In my experience I deem the venting of traps a necessity not only as a preventative against siphonage, but also against corrosion which will take place in traps that are not vented. Decay is certain to take place through chemical action. The most perfect ventilation must be maintained. A trap that is well ventilated will last five times as long as a trap that is not. The confined carbonic acid gas corrodes the lead and soon causes the surface of a trap above the water line to become a mass of oxycarbonate of lead which is deposited in white scales." The Plumbers' Trade Journal comments on this reason as below: "We believe that our friend has the right idea regarding this particular advantage to be gained from ventilation.

"While he has given it a little more credit than could result from a comparative test, we certainly believe that through ventilation the life of the plumbing system is materially lengthened. The carbonic acid gas which exists in considerable quantity in all sewers is without question detrimental to the metals which go to make up the plumbing system, and when confined is of course much more destructive.

"While traps of certain makes may be said to be non-siphonable under any ordinary test such as would arise in actual use, the matter of ventilation, as our correspondent observes, will give valuable service outside of the matter of prevention of siphonage."

New Iron Nickel Alloys.

Two of the remarkable alloys discovered by Dr. Guinaume, in his study of high nickels and iron compounds, are now made on a commercial scale. The first, to which the name Invar has been given, contains 37 per cent. of nickel and after special heat treatment is practically unalterable in length, between the ordinary ranges of atmospheric temperature, the dilation per degree Fahrenheit being only one thirty-sixth of a mile. This is coming into use for standard bars, wire for base line measurements, and other geodetic purposes, as well as for the pendulum rods of as-

CHARLES BAYNES, England.
 MAKER OF THE KNUZDEN BROOK, BLACKBURN,
"CLICK-CLACK"
 HACK SAW BLADES.
 In Factory Solel Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited

HANOVER, ONTARIO.

Manufacturers of **"Saugeen Brand"**
 the Celebrated **OF PORTLAND CEMENT.**

Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Especially designed for export With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— Emlyn Engineering Works
 "Machinery," Newport. NEWPORT, MON., ENGLAND



Will Hold Up a Shelf !

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the **BRADLEY STEEL BRACKET.** It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,
 New Haven, Conn., U.S.A.

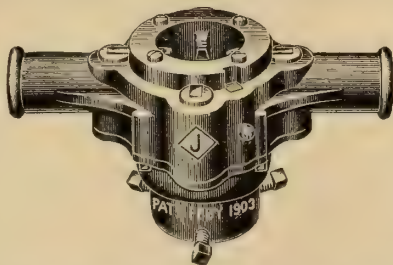
To Manufacturers' Agents

Hardware and Metal has inquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of inquirers in our various offices throughout Canada and in Great Britain without charge.

Address

Business Manager
 HARDWARE AND METAL
 Montreal and Toronto



It is a fact that one man with our **PATENT PIPE DIE** can easily do the work of two men with any other. Send us your address and we will explain HOW and WHY.

A. B. JARDINE & CO.

Mfrs. TAPS and DIES.

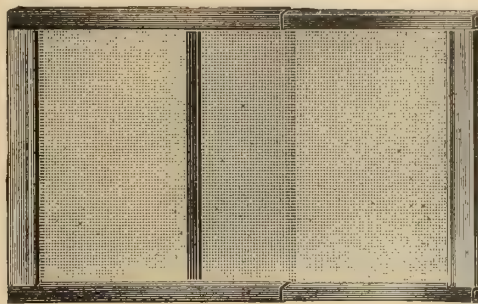
HESPELER, ONT.

PIG IRON

FOR
 IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.



Canadian Patent, March 17, 1903.

U. S. Patent, January 26, 1904.

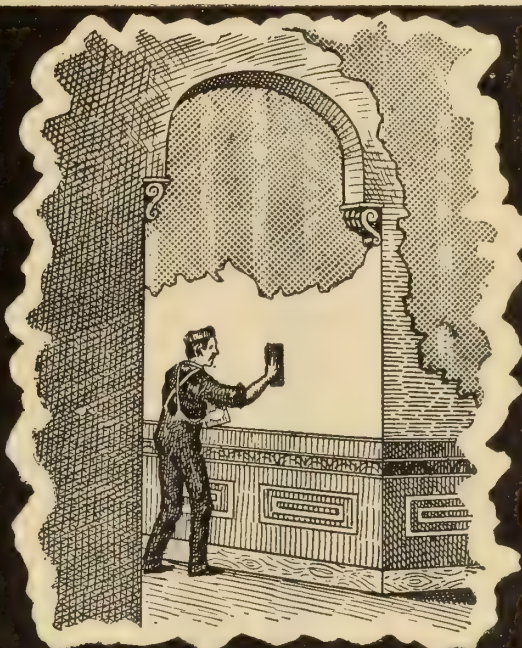
THE IRON AGE.

Metal replaces wood. Our Metal Screens are to be preferred from every point of view to Wood Screens. The cost is no more.

You can and ought to sell them.

Write for circular.

C. M. Cutts & Co., Makers
 Toronto Junction.



Pedlar's "Perfect" Metal Lath

CHEAP AS WOOD

Delivered to any railway station in Canada, for 10c. per square yard. Discount to dealers. Circulars and samples on request.

Pedlar People, Oshawa, Can.,
 or 767 Craig St., Montreal, Que.



Our ———

J. M. T. Bathroom

Specialties

put all others in the shade, because they represent such inducing values that they sell at sight.

There is a constant and growing demand for this line and you cannot afford to overlook the very inducing proposition we are making dealers now.

JAS. MORRISON
BRASS MFG. CO.,
Limited
TORONTO.

tronomical clocks, and the compensation balances of chronometers. The alloy containing 46 per cent. of nickel known as platinite, has the same coefficient of expansion as glass, and may therefore be substituted for platinum in the manufacture of incandescent electric lamps.

Acetylene on Pleasure Yachts.

OWNERS of pleasure and other yachts have not been slow to measure the advantages of acetylene as the illuminant for such craft, says the Acetylene Journal. This is true especially since the storage system of employing acetylene by the use of acetone and asbestos as absorbents has come in. An ordinary sailing yacht of 70 to 90 feet, water line, requires approximately 14 lights. In regular use, the consumption on such a boat would not be more than 200 cubic feet per month. In the use of the new compression system by acetone, a cylinder measuring 12 inches in diameter and 36 inches in length would supply a vessel of this size with light through the entire season at a cost of about \$33.

For smaller yachts and launches, proportionate results may be attained. For a small boat requiring only four lights a tank of 8 inches in diameter and 30 inches in length, containing 125 cubic

feet of gas, would last two months, and two such tanks would supply such a boat one entire season at a cost of about \$12.50. There are many boats which would require only two burners. Estimating approximately, a tank of 6 inches in diameter and 30 inches in length, would supply such a boat two months at a proportionately small cost. In the above estimates, the use of the light to a somewhat unusual and extravagant degree is contemplated. In actual practice where there is any special desire for economy, it is found that a much smaller quantity of acetylene would suffice.

So much as a statement on the adaptability of acetylene for yachts. That this means of lighting has passed beyond the experimental stage, is shown by the fact that 32 fine yachts owned by leading yachtsmen are now equipped with acetylene by the storage system here alluded to. The storage system of acetylene in use so successfully on steam or sailing yachts is that which is furnished by the Commercial Acetylene Co., 80 Broadway, New York City. The claim which this house makes for its system is that the cost of acetylene thereby is little if any greater than oil and vastly cheaper than electricity, as it likewise is better. That it is safer than oil, electricity or any form of gas illumination has been formally proved by the insurance underwriters.

Building in Brantford.

THERE is a residential building boom on in Brantford. Nearly all the building that is being done is residential, either new houses or repairs to old. Factory building or factory extensions have been very scarce, and during the month of May, while there were 40 permits issued, not one was for a factory or factory extension. This season, up to June 1, there have been 178 building permits issued, compared with 64 for the same period last year. The total cost of building this year has been \$49,622, and for May \$24,100. Under building permits will be found a list of the more important permits issued during May.

Cement for Brass and Glass.

Make a resin soap by boiling 2 lbs. of caustic soda, and 6 lbs. of colophony in a gallon of water. Before use, stiffen to a paste with plaster of paris. The cement hardens in from 30 to 45 minutes, and resists heat and water very well. Zinc white, lead white, or slaked lime, may be substituted for the plaster of paris, but the cement made with them will take longer to set than if made from plaster of paris.

Do you use a

Roller Awning ?!

If not, why not? We make the best roller awning in Canada. We can operate a 60-foot awning on one roller from one end easily and safely. Write or call for particulars. The best is none too good for you.



WM. BARTLETT & SON

Tents, Awnings and Flags

16 Adelaide St. West,

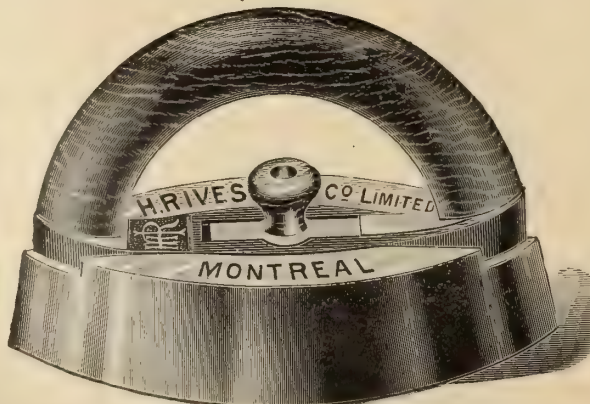
TORONTO.

THIS REPRESENTS OUR
NEW PATTERN.

Mrs. Potts'
SAD IRON

GREAT SELLER.

THE H. R. IVES CO., Limited, MONTREAL.



INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

A NEW 10-stamp mill has been installed at the Sunbeam gold mine, 100 miles north of Port Arthur. This mine has not been operated very successfully, but the discovery of ore in sufficient quantities to keep a 10-stamp mill running for 4 years has led the New York & Ontario Gold Mining Co., owners of the mine, to install the mill. The success or failure of the mine depends upon the results of the ore test now being made.

* * *

The Chicago Metallic Sash Co., manufacturers of metallic sash supplies, Chicago, are looking for a site in Canada for a factory. In a letter to the Hobbs Mfg. Co., London, Geo. W. Frohlich, of the Chicago firm, states that they do a large business in Canada, and that in order to save the duty they now have to pay on goods sold on the Canadian market, they wish to establish a Canadian factory.

* * *

Work at the Vernon copper mine, owned by the Maritime Copper & Production Co., at Goose River, St. John County, has been suspended on account of some difficulty between the stockholders. The company has been operating under a Nova Scotia charter, but as there were some doubts as to the validity of acts of the directors, a new charter was obtained from the New Brunswick Legislature last Winter, and the name changed to the Maritime Copper Co. Some of the stockholders refused to consent to the change, and consequently a deadlock resulted. There is danger of further trouble between the stockholders.

* * *

The prospectus of the Armada Weighing Machine Co., of Toronto, is being published. The company, which has an authorized capital of \$100,000, has acquired patents upon an automatic weighing machine for Canada, United States, Great Britain, Germany, Belgium, France and Italy. It is one of the unique inventions of the age, and is intended for the use of weighing and putting into packages such articles as tea, coffee, spices, sugar, cement, etc., etc., in fact, any article that can be run through a hopper into the weighing machine. The company are offering a small portion of the capital stock at par for the purpose of extending the business and equipping a larger factory.

The principal industry of Nanaimo, B. C., has been disabled because of fire. No. 1 pithead, of the Western Fuel Co., the large coal washer and the engine room, have been destroyed by fire. The total amount of the loss is \$80,000. In the engine room were the great hoisting engines, valued at \$25,000. The washer was of the most modern kind, being equipped with very expensive machinery of the latest pattern. It was valued at \$25,000. It is not expected that the handicap to the mining industry will be felt for very long.

* * *

For some time it has been a disputed question as to whether an iron ore smelter on the Island of Vancouver would be a paying affair. Wm. Price, of Port Townsend, U. S., who has managed the Irondale smelter in that place for some time, thinks that the establishment of a smelter on Vancouver Island would be a good business proposition, and it is thought locally that Mr. Price may take the initial steps towards the establishment of such an industry. Vancouver Island contains all the raw materials necessary for the manufacture of pig iron, and they are claimed to be of the best quality.

* * *

The Canadian Pacific Railway has placed an order with the Perth shops of the company for 85 flat cars, 25 passenger refrigerators, and 100 steel cars. The flat cars will be 36 ft. 8 in. long, by 8 ft. 10 in. wide, over frame, and of 30 tons capacity. They will be equipped with 33 in. cast iron standard wheels, 30 ton roller trucks, Westinghouse brakes, Simplex brake beams, Tower couplers, tandem draw-bar attachment, St. Thomas Brass Co.'s journal bearings. The passenger refrigerators will be 38 ft. 8 in. long, and 8 ft. 11 in. wide, of 30 tons load in freight, and 20 tons in passenger. They will be equipped with 33½ in. steel tired wheels, 40 ton roller trucks, the other equipment being the same as the flat cars.

— —

NOTES.

It is possible that the Canadian tin plate industry may not leave London, as proposed.

James Ross, president of the Dominion Iron & Steel Co., is now home from a several months' trip to Europe.

Over 200 men are out on strike at the International Harvester Co.'s works, Hamilton.

The Quebec Southern and South Shore Railways are to be sold for the benefit of the creditors.

The capital stock of the Star Mantle Mfg. Co., Limited, has been increased from \$10,000 to \$25,000.

The Barrie Tanning Co., Barrie, Ont., have just installed a new Leidger un-hairing machine, which will facilitate greatly the work in the tannery.

The strike at the works of the Dominion Iron & Steel Co., Sydney, N. S., still continues, nor does there seem much change in the situation.

The Ontario Bureau of Mines is sending out a party, under the leadership of Dr. J. M. Bell, to make further explorations in the iron ore fields of the Michipicoten District.

A very fine grade of mineral ore, containing gold, silver and copper, is being taken from a newly discovered property known as the Cascade property, on Vancouver Island.

The Woodstock Varnish Co., Woodstock, Ont., has been re-organized. County Crown Attorney Curry, Toronto, has been elected president; Dr. Sinclair, Woodstock, is vice-president; and A. Powell, Woodstock, is manager.

The Dominion Wire Fence Co. are considering the proposition of establishing a factory in Berlin, and have examined the ground to see if there is a suitable site. They ask exemption from taxation for 10 years, and G. T. R. and P. & B. sidings to their factory.

It is announced that the Morgan Construction Co., Worcester, Mass., who are going to construct a rail mill at Sydney, N. S., intend bringing in several hundred men from the States to do the work.

The recent finds of soft hematite iron ore reported in Hunter's Island District, New Ontario, are being investigated and developed by the Merritts of Duluth. It is confidently asserted that this ore is bessemer.

Since sluicing began in the Klondike this season, and up to June 1, 55,753 ounces of gold have been produced. This is the largest amount ever taken out of that district before June 1, the output last year being only \$11,000 up to June 1.

A dispatch from New York states that James Gayley, vice-president of the United States Steel Corporation, has perfected a new process of producing steel, which he claims greatly reduces the cost of manufacture. The new process is a modification of the Bessemer process.

The Government is asking the Nova Scotia Steel & Coal Co. for a right of

way parallel with their private line from Sydney, N. S., to Sydney Mines, in order that a line of public railway may be extended to Sydney Mines. This has been wanted by Sydney Mines for some time

COMPANIES INCORPORATED.

Northern Securities, Limited, Toronto; capital, \$100,000; purpose, to carry on a brokerage business.

The Northwest Co-operative Investment Co., Winnipeg; purpose, to carry on a loan and investment business.

The Montreal & Ottawa Peat Co., Ottawa; capital, \$75,000; purpose, to engage in the manufacture of peat fuel.

The Digby Lumber Co., Limited, Toronto; capital, \$25,000; purpose, to carry on a lumber and timber business.

The Kingston Milling Co., Limited, Kingston; capital, \$60,000; purpose, to manufacture flour, oatmeal and cornmeal.

The Northern Timber Co., Limited, Toronto; capital, \$100,000; purpose, to deal in timber, timber lands, timber berths or rights.

John B. Smith & Sons, Limited, Toronto; capital, \$400,000; purpose, to carry on the business of manufacturing and dealing in lumber.

Orr Bros., Limited, Toronto; capital, \$10,000; purpose, to carry on the business of contractors for the erection of buildings and other structures.

The Pelee Island Navigation Co., Limited, Township of Pelee; capital, \$25,000; purpose, to carry on a transportation business by steamboat.

Mulholland-Newcombe, Limited, Toronto; capital, \$40,000; purpose, to manufacture and deal in pianos, organs and musical commodities.

The J. D. Abraham Co., Limited, Delhi, Ont.; capital, \$25,000; purpose, to carry on business as a general merchant.

The Galt Down Draft Furnace Co., Limited, Galt, Ont.; capital, \$100,000; purpose, to manufacture and sell furnaces, stoves, heating and ventilating systems, and castings.

The Owen Sound Natural Gas and Oil Co., Limited, Owen Sound; capital, \$10,000; purpose, to maintain and operate plants for the production and distribution of electric power and also natural gas.

LICENSES GRANTED.

The Welland Canal Tug Co., Limited, incorporated under the laws of the Dominion of Canada, to carry on business in Ontario.

Underwriters, Limited, Toronto, incorporated under the laws of the Dominion of Canada, to carry on business in Ontario.

CEMENT TESTS.

WITH the rapidly increasing use of cement in construction work, the time has come when a systematic system of testing cement should be established, says the Architect and Builder. It is quite as much to the interest of cement manufacturers and dealers as to the interest of owners, architects and builders, that all cement should be subjected to test. If this plan is not followed, we may expect to see failures in cement construction which will tend to weaken confidence in the material and greatly restrict its use. That there is a great deal of cement of poor quality on the market is a well known fact, and steps should be taken to prevent this material from getting into works of construction. A Canadian manufacturer of cement submitted a sample of his material to one of the Canadian scientific schools recently, and it failed to stand the hot test. If such was the result with a cement that may be supposed to have been specially selected for testing purposes, there is every reason to suppose that much of the cement bought and sold in the ordinary course of business is far below the proper standard of quality. In what way the testing of the material should be carried out is not quite clear. It has been suggested that the Government might inspect the material at the mills, as is done in Germany, but governments are slow to act, and the adoption of a system might be indefinitely postponed if the Government were depended on to undertake the work. Perhaps a better plan would be for each city and town to adopt a regulation compelling all cement used within the municipality to be subjected to test. It is to be hoped that action will be taken in this direction at once, in order, as stated, that the development which cement is now having, may not be retarded.

SOMETHING NEW IN EXPANSION BOLTS.

THE New Jersey Foundry & Machine Co., of 9 Murray street, New York, have just issued a four-page circular descriptive of their new one-part diamond expansion shield. For years the impression has been that expansion bolts were only intended for use in masonry, but it is stated by the manufacturers that the diamond one-part expansion shield will hold equally well in wood and will not work loose. For fastening down chairs and desks in school rooms, stools in stores, opera chairs, locks on doors of passenger coaches, etc., where constant use tends to loosen the screws, the advantages of this shield are at once apparent. With this shield it is only necessary to bore a hole with an ordinary bit, insert the shield and run in the screw the same as in wood. The shield is made with four prongs, which insures a uniform grip in all directions. The diamond one-part expansion shield is made in standard sizes from $\frac{1}{2}$ inch to 5-16 inch diameter, to fit wood screws from No. 5 to No. 18 inclusive. Any kind, make or length of wood screw can be used. The New Jersey Foundry & Machine Co., who manufacture these shields, carry all sizes of the one-part shield in stock, and also of the diamond two-part expansion shield up to 2 inches diameter.

Memorial Windows

UNEXCELLED
DOMESTIC ART GLASS

H. E. St. George, London, Ont.

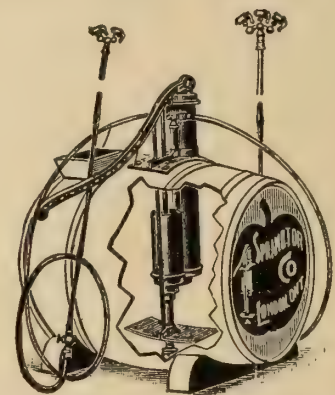
Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

U.S. and Foreign Patents, Caveats, Copy-rights and Trade Marks. Military and Naval Inventions a specialty. Address,

Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP
Warren White Sulphur Springs,
Totten P.O., Virginia.



THE SPRAMOTOR

is recognized by the users as the most durable and efficient apparatus yet invented, for the

Prevention of blight and bugs on fruit and potatoes.

For the destruction of wild mustard in the grain crops without injury to the grain, and for

The painting of buildings.

Has been awarded First Place by the Canadian Government in actual contest, and

The Gold Medal at the Pan-American.

The Trade fully protected.

Write for particulars and discounts. Terms liberal.

THE SPRAMOTOR CO.,

68-70 King St..

LONDON, CAN.



METAL SKYLIGHTS and
WINDOW FRAMES
Glazed with FIREPROOF GLASS.

CORRUGATED IRON
and
FIREPROOF DOORS.

ROOFINGS, CORNICES
and CEILINGS.

A. B. ORMSBY LIMITED,
MANUFACTURERS AND CONTRACTORS,
Cor. Queen and George Streets,
TORONTO, ONT.

FULL STOCK

Salt Glazed Vitrified

Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.

PORTLAND CEMENTS

Best German, Belgian and English
Brands.FIRE BRICKS
FIRE CLAY
FLUE LININGS
DRAIN PIPES
HARD WALL PLASTER
CALCINED PLASTER
WHEELBARROWS
MORTAR STAINS.A Full Stock of Builders' and Con-
tractors' Supplies.

W. McNALLY & CO.

40 to 52 McGill St (Cor. Wellington St.)

MONTREAL.

Write for our quotations.

Permanent, Economical,
Handsome.

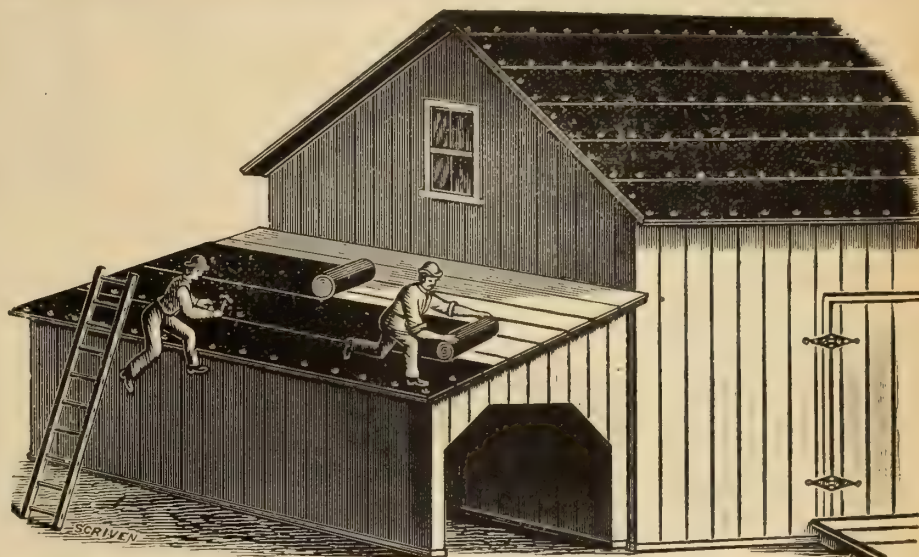
Arrow Brand Asphalt Ready Roofing.

Comes in rolls, ready to lay, with nails and cement.
All ready covered with white sea gravel. No further attention after laid.

A. G. JENKING, Sole Agent,

Room 215 Coristine Building, - MONTREAL.

Sun, Frost, Water, Fumes DO NOT affect it. Write to-day for agency.



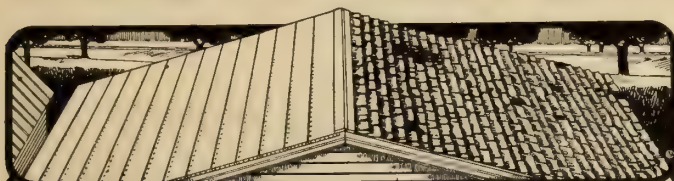
USE MICA ROOFING

For Flat or Steep Roofs. It is Waterproof,
Fireproof, quickly and very easily laid, and
cheaper than other roofing.

HAMILTON MICA ROOFING CO.,

60 Catherine Street North,

HAMILTON, CANADA.

CONSTRUCTION vs. DESTRUCTION.
CARE vs. CARELESSNESS.
BEST MATERIAL vs. POOR MATERIAL
REX FLINTKOTE ROOFING vs. ALL OTHER ROOFING.REX Flintkote Roofing
TRADE MARKThe above tells the whole story, and means to the dealer a quick-selling, business-
bringing roofing vs. the ordinary kind that never sells, because people don't want it,
and when they are persuaded to try it never come back again. If you want satisfied
customers for roofing, you should write us to-day about REX Flintkote Roofing.

J. A. & W. BIRD & CO., 49 India Street, Boston, Mass.

Mr. Hardwareman.

Do you get all you can out of the building
operations in your town?

Manufacturers

are making some good propositions on this
page; look over their advertisements and,
if you do not handle their goods, write them
asking for full particulars.

ALWAYS BE READY TO ENLARGE YOUR BUSINESS.

ATKINS HIGH-GRADE, CROSS-CUT SAWS

OUR VICTOR, TUTTLE TOOTH AND SEGMENT GROUND SAWS ARE THE FAVORITES IN THE CAMPS

E. C. ATKINS & CO.,
INCORPORATED.

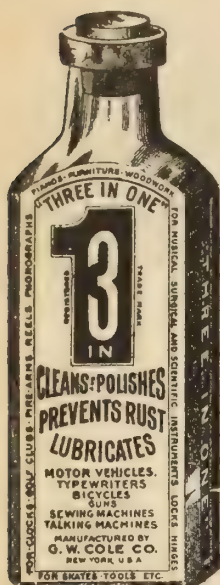
Factories and Home Office: INDIANAPOLIS, IND., U.S.A.

C. D. TEN EYOK, Sales Agent for Canada. Toronto Office; 30 Front St. East. Tel. Main 1896.

LEADING MANUFACTURERS OF HIGH-GRADE, CROSS-CUT, HAND, BAND,
CIRCULAR, HACK, BACK, WOOD AND SMALL SAWS OF ALL KINDS

Write for Catalogue and Prices

3 in One



O ilright for delicate mechanism, guns, bicycles, etc. "3 in 1" is the ideal lubricant for all oiling purposes. Will not gum, thicken, turn rancid or collect dust. Cleans and polishes and positively prevents rust on metal surfaces in any climate or in any kind of weather, better than furniture polish for veneered and varnished surfaces. Sold by all the leading jobbers in Canada.

G. W. COLE CO.

141 Washington Life Bldg., New York.



EVERYTHING FOR THE OFFICE

McCloud's Easily-Adjustable Spring Back Chairs for stenographers, bookkeepers and office men.

The Perine & Mosely Company "Business System in the Sales Department." Their commercial Routing and Recording System keeps track of customers, agents, and their territory.

Volkert's Interchangeable Leaf Ledgers. The most perfect perpetual interchangeable ledger system made.

Gunn's Office Desks. The World's best.

The Waggoner Watchman Clock. The latest and best saver of time, trouble and money.

Triner's Automatic Office Scales. Indicate instantly the exact cost of postage.

Keller's Inks, Sealing Wax, Mucilage and Syphon Ink Wells.

Whitfield Carbon Paper and Typewriter Ribbons.

IF YOU NEED ANYTHING FOR THE OFFICE, WRITE US TO-DAY.

THE DOMINION OFFICE SUPPLY CO., - Walkerville, Ont.

A Store Run With System

is likely to include a

HALLWOOD CASH REGISTER

The Hallwood depends for its sales upon the sound, independent judgment of the merchant. Of course, good salesmen present the merits of the machine, and if, after that, the merchant finds the Hallwood and the Hallwood System faulty, the matter has to drop.

Not many sales lost where inspection is granted.

WRITE FOR DESCRIPTIVE LITERATURE.

THE

Hallwood Cash Register Co. of Canada

78-80 King St. E.,
TORONTO.

1782 Notre Dame St.,
MONTREAL.



A DISTINCT TYPE

The OLIVER has certain superior features and unique improvements exclusively its own.

The

OLIVER

Typewriter

The Standard VISIBLE Writer.

Operates as smoothly as the delicate mechanism of a watch, durability unquestioned.

Works in a Whisper

Art Catalogue Free.

THE CANADIAN OLIVER TYPEWRITER CO.

156 8 St. Antoine St.

MONTREAL.

Agents wanted in all unoccupied territory.

THE OFFICE END

DEVOTED TO THE
OFFICE STAFFS OF
BUSINESS
ESTABLISHMENTS

CARDS VS. LEDGERS.

BEFORE the Birmingham Chartered Accountants' Students' Society, Mr. John Wilson, a director of a large English house, delivered a lecture dealing with bookkeeping by cards. A part of his lecture was as follows:

Permit me at the outset to clearly state I do not claim to be the originator of the card system, but of a card system of bookkeeping. For a layman to address a society of students who are daily in touch with the most expert and up-to-date accountants savors somewhat of egotism. I do not claim to be an accountant, but my long experience of counting-house work has educated me for account-keeping suitable for a large commercial house where there are continuous entries recurring, and with a view of advancing a greater interest in an important section of all commercial enterprise—namely, the “keeping of accounts,” I have always recognized its importance and pressed its claims.

In my opinion, it matters little whether accounts are kept in ledgers, on loose leaves, or on cards; the essential in account-keeping being accuracy, safety, simplicity. If without endangering these essentials I can obtain the same results more readily and so save labor and expense, I am sufficiently radical to try any labor-saving method, or, to use the hackneyed election cry, combine “economy with efficiency.”

1. As to Accuracy.—Because a leaf is loose, instead of being bound in a book, can make no possible difference as far as an actual record is concerned.

2. As to Safety.—I have proved that a leaf can be taken from a ledger and not missed for weeks, months, and perhaps not at all, unless wanted.

Now, a card cannot be taken from a cabinet without being instantly missed. Therefore, I claim that a cabinet of cards, properly managed, and subject to daily checks—only a glance—is quite as safe as a ledger.

3. Simplicity.—There can be no possible doubt that a card can be much easier found than a folio in a ledger, and the calling back from the card much quicker.

Pardon me for a moment taking you through an ordinary posting.

We have here the journal or day-book entry, and find on page 7-783:

Polley and Clarke, Limited,
66 Corporation street,
Birmingham, £19 17s 4 1-2d.

The old method is:

Refer to index page.

Find the name and folio, say 2823.

Find 2823 in ledger.

Make our entry: £19 17s 4 1-2d, 7-783 reference.

Turn to day-book, and fill in folio of ledger, 2823.

We have five transactions, and eight figures of reference.

By the introduction of the combination of my card system with the Library Bureau, Addressograph, and Burroughs' Adding Machine, I claim to have saved half the labor of posting, calling back, making statements, addressing the envelopes and balancing the ledgers.

Example:

Polley and Clarke, Limited,
becomes 2823.

The spelling and address has been checked and approved, so once right always right. Get your addressograph link correct and the combination of links to suit your requirements and mistakes become almost impossible if ordinary care is used.

The Addressograph.—To set up a link takes three to five minutes. The first process for a new account seems a little waste of time. This, however, is not so when you consider the process of one transaction only.

For instance, the name repeats itself for index accounts, circulars index, ledger index, heading ledger, heading invoice and envelope, heading statement and envelope, label on parcel, consignment note—at least twelve repeats. If, therefore, you are getting the same customer constantly repeating, the saving is considerable. If you will time the boy at the addressograph you will see how quickly the addressing is done.

2823 Twenty repeats please.

The loose sheets, of course, represent the various stationery.

I think I am well within the mark in saying it takes a fast writer to address 100 envelopes in the hour, and then accuracy is not of necessity secured; this number can be produced from the addressograph in five minutes.

Shall we now consider the ledger?

Who has not longed to give a helping hand when a ledger was “out”? And several who could have helped were helpless because it was “one man, one book.” This difficulty is solved by using the card ledger. You can take it in sections, and put on as many clerks as there are sections, or a clerk to each card if you wish it.

On interviewing customers relative to the state of an account or a dispute, the old-fashioned order of “Bring in the ledger” has passed away. Instead of stopping the ledger clerk or sending him off for a holiday, or to pass perhaps half an hour in idleness while you have the ledger, or worse still, to find a clerk popping in and out like a jack-in-the-box to make a reference or two from his ledger, the new order of things is, “No. 101 ledger card, please!” You have the account you want, the clerk is free to follow his own sweet will—or rather, go on with his work, the customer can look over your shoulder while he discusses the account, without your fear of exposing his neighbor's account on the opposite page.

Early in the month I had the misfortune to be in bed for a few days; some dozen accounts or more re-

Trade With England

Every Canadian who wishes to trade successfully with the Old Country should read

"Commercial Intelligence"

(The address is 168 Fleet St., London, England.)

The cost is only 6c. per week. (Annual subscription, including postage, \$4.80.)

Moreover, regular subscribers are allowed to advertise without charge in the paper. See the rules.

NEW TELEPHONE LINE

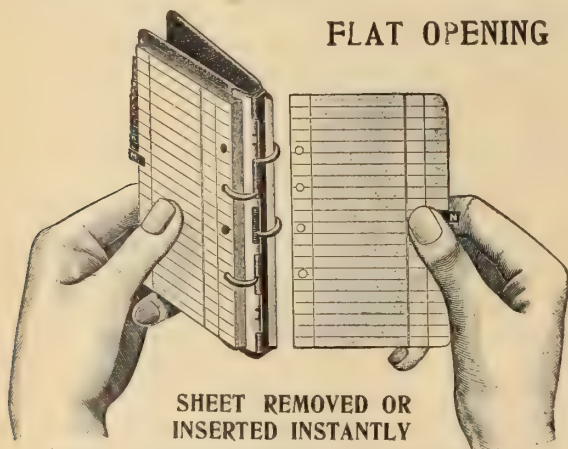
A new copper metallic line has just been completed from Simcoe to Port Rowan. The towns listed below can now be reached from Toronto at the following rates:

PORT ROWAN	-	50c.
ST. WILLIAMS	-	50c.
VICTORIA	-	40c.

The Bell Telephone Co. of Canada

TENGWALL LOOSE LEAF PRICE BOOK

FLAT OPENING



SHEET REMOVED OR
INSERTED INSTANTLY

SEND FOR DESCRIPTIVE PRICE LIST.

HART & RIDDELL, Manufacturers Loose Leaf
Ledgers and all kinds of Binders. TORONTO

You never know

how many mistakes you have made when you send out your accounts in the old way.

THE BRIGGS LEDGER SYSTEM

has a three-fold check on every account that is rendered. Your bills are always ready and balanced to date. Based on the English Banking System. Any one can be a book-keeper. Catalogue (illustrated) sent free upon request. Write to-day.

The Briggs Ledger System Co.,
Limited

75 York St., - Toronto, Can.

quired dealing with as to immediate delivery of goods exceeding the high limit mark. Before a just decision could be given it was necessary to review the working of the account for twelve months or more. Let me give you the alternative under the old rule:

1. A clerk spending unlimited time taking copies of the accounts; or,

2. Loading up the ledgers and carting them to me! The poor invalid groans under the ledger on his bed! The work at the office ceases until the return of the cart!

This is now changed; we are under the dispensation of the card system. The clerk waltzes gaily into the room with a dozen or more ledger cards some few ounces in weight; the bed-stricken one, without even raising himself on his pillow, reviews the position of the account, gives a fair and wise decision, and so once more mind prevails over matter, or, in other words, cards triumph over ledgers. This, however, may be criticized as theory, and it has truly been said: "One ounce of fact is worth pounds of theory"; still, theory must come first, hence I have taken it in order. We will now take a few facts:

I have here a perforated sheet taken from a book, on the left-hand side of which are particulars of nineteen departments. Instead of posting from a book in which there are twenty-one pages of detail, I distribute the book by tearing out the perforated portion, so that the eight sections of the business can be posted at the same time. There are fifty-one postings to be done, and I will ask the ledger clerk and his junior to post fifty-one items—the actual transactions of a portion of a section for one day. Will you kindly time them during the work and I will go on talking. I make the time 7.12.

My past experience has been that to refer to a loose index, post and call back fifty postings, took twenty-five to thirty minutes, or say 1,500 postings and calling back was a good day's work for ledger clerk and junior, and then when ledgers came to be balanced you sometimes found a mistake—but where? Somewhere in the book, certainly, but where? Now with the cards you have the accounts disconnected with the other accounts, and know for a certainty that the error must be on the cards out of the cabinet, not those in the cabinet. In calling back a ledger you have to repeat the process of finding folio after folio; with the cards they are in order, and called back much more quickly. I admit the cards have to be put away again, but this is a small matter, as you will see when the junior comes to that process.

COMMERCIAL LAW.

FREQUENTLY business men have need of the services of lawyers in centres other than their own. Whether for legal representation, the organization of companies, searching titles to property, watching the interests of creditors or for the collection of accounts it is generally wise to be in close touch with a reliable legal firm who are "on the spot." For this reason, merchants should often refer to the legal cards on another page. The firms whose card are inserted are reliable and capable of any work required of them by readers of this paper.

This list is for the purpose of placing retailers, manufacturers' jobbers and other readers in touch with reliable and competent accountants and auditors whose services are so frequently required for such purposes as opening books,

Leading Canadian Accountants and Auditors

adjusting and auditing accounts, arranging partnerships or organizing joint stock companies, devising special office systems, making collections and investigations, handling estates, making valuations, etc.

DAVID HOSKINS, F.C.A.
Chartered Accountant,
Auditor,
Financial Valuator.
207 Manning Chambers, City Hall Sq.,
Toronto, Canada.

Cable Address: "Wigwam."
T. G. WILLIAMSON,
Chartered Accountant and Auditor,
15 Toronto St., Toronto, Canada.

F. H. KIDD,
Chartered Accountant, Auditor,
Assignee, Etc.
505 McKinnon Bldg., - Toronto.

JENKINS & HARDY,
Assignees, Chartered Accountants,
Estate and Fire Insurance Agents.
15½ Toronto Street. Toronto.
465 Temple Building, Montreal.
100 William Street, New York.

This space \$15 a year.

HENRY BARBER & CO.,
Accountants and Assignees.
Offices:
18 Wellington St. E., Toronto, Ont.

WILLIAM FAHEY,
Accountant and Auditor.
462 McKinnon Building, Toronto.

This space \$15 a year.

GEO. O. MERSON,
Chartered Accountant,
Auditor, Assignee, etc.
Regular and Special Audits.
27 Wellington St. E.,
'Phone Main 4744. Toronto.

This space \$15 a year.

This list is for the purpose of placing manufacturers, wholesale and retail merchants and other readers throughout Canada, and firms abroad doing business in Canada, in touch with the legal profession throughout the Dominion, for the collection of accounts, legal representation,

LEGAL CARDS.

organization of companies, the arrangement or dissolution of partnerships, or assignments, as well as all other matters of a legal nature.
For advertising rates apply to MacLean Publishing Co., Limited, Montreal or Toronto.

**BEATTY, BLACKSTOCK, FASKEN
& RIDDELL,**
**BEATTY, BLACKSTOCK, CHAD-
WICK & GALT,**
Barristers, Solicitors, Notaries, Etc.
Offices, Bank of Toronto,
Tel., Main 8818. Toronto, Ont.

JAS. H. BURRITT, K.C.
Solicitor, Notary, Etc.
Pembroke, - - Ont.

D. O. CAMERON, Barrister.
Equity Chambers, Toronto.
Branch Office, Oakville, Ont.

I. L. O. VIDAL.
Barrister, Solicitor, etc. Collections
and Commercial Law.
Montmagny and Quebec City, Que.

TUPPER, PHIPPEN & TUPPER,
Barristers, Solicitors, Etc.
Winnipeg, - - Canada.

J. C. HAMILTON, LL.B.,
Barrister, Solicitor and Notary.
McKinnon Building, Toronto.
'Phone, Main 65.

ATWATER, DUCLOS & CHAUVIN
Advocates. Montreal.
Albert W. Atwater, Q. C., Consulting
Counsel for City of Montreal. Chas.
A. Duclos. Henry N. Chauvin.

Educational Department.

The following institutions for the education of business men's sons and daughters are recommended by this paper:

Learn the Law about

Joint Stock Companies

To-day a large percentage of the world's business is done by joint stock companies.

Wouldn't it be worth while to know all about Joint Stock Company Law?

Nearly everyone needs the knowledge of it in business life.

We teach it by Mail at a small cost.

Write for information about our course in Joint Stock Company Law.

CANADIAN CORRESPONDENCE COLLEGE, Limited
TORONTO, CANADA.

Western Business College

Cor. College and
Spadina avenue, **TORONTO.**

Thorough courses in Bookkeeping, Stenography, Typewriting
and Penmanship; individual instruction.

A. J. HOARE, Principal.

St. Margaret's College, Toronto

A Boarding and Day School for Girls.
Thorough courses in every department.
Only teachers of the highest academical and professional standing employed.

GEORGE DICKSON, M.A.,
Director.

MRS. GEORGE DICKSON
Lady Principal.

Typewriting.

Bookkeeping and Shorthand are
sure stepping-stones to success.

Teachers who have had practical
business experience teach these
branches in

THE WILLIS BUSINESS COLLEGE.

A school of genuine merit. Send for our beautiful catalogue.

S. T. Willis, Principal, Cor. Bank and Albert Sts., OTTAWA.

1889.

The Belleville Business College, Limited,

Business firms get the best results by applying to us 10 days before vacancies
occur in their employ.
See Catalogue pages 21, 27, 33, 41.

J. A. Tousaw,
Secretary.

BELLEVILLE,
ONTARIO.

J. Frith Jeffers, M.A.,
President.



TORONTO'S QUICK AND SURE PRINTERS

We do all kinds of good printing cheap. Let us
handle your next order and you will be satisfied.
Latest styles in Type and Borders. Everything
up to date.

1,000 LINEN LETTERHEADS THIS MONTH, \$2.50.

G. A. Weese & Son, 44 Yonge St., Toronto.

ADVERTISE YOUR BUSINESS

Write for particulars about our cuts and ads. from 50 cents up. To
advertise in newspapers. Catchy ideas to catch business. Given to one
merchant in a town. Send us your ads. and we will criticize them free.
WRITE TO-DAY.

GEO. J. SMITH BUREAU, 621 BROADWAY, N.Y.

WE WRITE ADS. IN FRENCH.

Roofing Felt Factory

Harbor St.,
Montreal.

Paper Manufacturers

Paper Mills,

Joliette,
Quebec.

Building Papers

Ready Roofing

Pitch and Roofing Cement

Black Diamond Brand



Brown and Manilla Wrapping

Hanging and Print,

Colored Papers

ALEX. MCARTHUR & CO., Office 82 McGill St., Montreal
LIMITED.

CURRENT MARKET QUOTATIONS.

June 10, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

TIN PLATES.

Charcoal Plates—Bright. Per box.
M.L.S., equal to Bradley—
I.C. usual sizes.....\$6 50
IX.....8 00
IX X.....9 50

Famous, equal to Bradley—
I.C.....6 75
IX.....8 25
IX X.....9 75

Raven and Vulture Grades—
I.C. usual sizes.....4 25
IX.....5 00
IX X.....5 75
IX X X.....6 50

"Dominion Crown Best"—Double
Coated, Tissued. Per box.
I.C.....5 50
IX.....6 50
IX X.....7 50
IX X X.....8 50

Allaway's Best—Standard Quality.
I.C.....4 50
IX.....5 50
IX X.....6 50

Coke Plates—Bright.
Bessemer Steel—
I.C. usual size, 14x20.....3 35
I.C., special sizes, base.....3 60
20x28.....7 10

Charcoal Plates—Terne
Dean or J. G. Grade—
I.C., 20x28, 112 sheets.....7 50
IX., Terne Tin.....10 50

Charcoal Tin Boiler Plates.
Cookley Grade—
X X, 14x56, 50 sheet bxs. }
" 14x60, " }
" 14x65, " }

Tinned Sheets.
72x30 up to 24 gauge.....7 25 7 50
" 26.....7 75 8 00

IRON AND STEEL.
Common bar, per 100 lb.....1 80
Refined.....2 20
Horseshoe Iron.....2 25

Hoop steel, 1½ to 3-in. base.....2 75
Sleigh shoe steel.....2 10
Tire steel.....2 30
T. Firth & Co.'s tool steel, per lb 0 12½ 0 13

B. K. Morton & Co.—
"Alpha" tool steel.....0 70
"M" Self-Hardening.....0 60
"I" Standard.....0 14

Jessop's high speed steel.....0 60
"standard tool steel.....0 14
"crucible sheet steel.....0 08 0 09
Chas. Leonard's tool.....0 08 0 09

Crucible Steel Co.
"Black Diamond.....0 10 0 11
"Silver steel.....0 13
"Special.....0 17
"Rex high speed steel.....0 65 0 75
"Self Hardening.....0 45 0 50
"Standard.....0 04 0 09

Sanderson's Crucible Tool.....0 12 0 13
"Superior.....0 15 0 16
"Extra Anil.....0 45 0 50
"Self Hardening.....0 65 0 75
"Rex high speed.....0 10 0 20
Jonas & Colver's tool steel.....0 70
"Air Hardening.....0 70

Drill steel, per lb.....0 08 0 10

BABBIT METAL.

"Tandem," A.....per lb. 0 27
" B.....0 21
" C.....0 11½
Frictionless Metal.....0 23

Syracuse Smelting Works:
Aluminum, genuine.....0 45
Government.....0 44
Tough.....0 40
Hard.....0 40
Dynamo.....0 30
Special.....0 25
Harmony.....0 22
Car Box.....0 20
Extra.....0 15

The Canada Metal Co.:
Imperial, genuine.....0 40
Metallic.....0 30
Hercules.....0 20
Star.....0 15
No. 1.....0 12
No. 2.....0 10
No. 3.....0 06
No. 4.....0 05

Geo. Langwell & Son.
No. 1.....0 08
No. 2.....0 07
No. 3.....0 05½
Extra.....0 09½

BLACK SHEETS.
Montreal Toronto
10 and 16 gauge.....2 25 2 50
18 gauge.....2 30 2 50
20 gauge.....2 30 2 50
22 to 24 gauge.....2 35 2 70
26.....2 40 2 80
28.....2 40 2 90

COPPER WIRE.
Discount, 50 per cent.

CANADA PLATES.
Ordinary.....2 60
All bright.....3 50
Galvanized Canada Plates—
Ordinary.....Dom.
Crown.

18x24x52.....4 25 4 35
" 60.....4 50 4 60
20x28x80.....8 50 8 70
" 94.....9 00 9 20

GALVANIZED SHEETS. Queen's
Fleur-de-Lis. Gordon Crown. Comet Bell. Head
16 gauge.....3 65
18 to 24 gauge.....3 75 3 75 3 75
26.....4 00 4 00 3 90 4 00
28.....4 25 4 25 4 05 4 25

American brands, \$4.00 for 28 gauge.
Less than case lots 10 to 15c. extra.

CHAIN.
Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 5-16 ".....5 60
" 7-16 ".....4 45
" 9-16 ".....3 85
" 11-16 ".....3 70
" 13-16 ".....3 55
" 15-16 ".....3 45
" 17-16 ".....3 35
" 19-16 ".....3 25

HALTER, kennel and post chains, 40 to 40 and 5 per cent.

Cow ties.....40 p.c.
Tie out chains.....65 p.c.
Stall fixtures.....35 p.c.
Trace chain.....45 p.c.
Jack chain, iron, single and double, discount 35 p.c.

Jack chain, brass, single and double, discount 40 p.c.

COPPER.
Ingot. Per 100 lb.
Casting, car lots.....13 75
Bars.
Cut lengths, round, ½ to ¾ in. 21 00 23 00
" round and square,
1 to 2 inches.....21 00 23 00

Sheet.
Plain, 16 oz., 14x48 and 14x60.....20 00
Plain, 14 oz.....21 00
Tinned copper sheet.....24 00
Planished.....32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb.0 22
" 35 to 45 ".....0 21
" 50-lb. and above ".....0 20

BOILER AND T.K. PITTS.
Plain tinned, per lb.....0 28
Spun, per lb.....0 32

BRASS.
Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4.....0 23½
Tubing, base, per lb.....0 23½

ZINC SPELTER.
Foreign, per 100 lb.....6 00 6 25
Domestic ".....

ZINC SHEET.
5-cwt. casks.....6 15 6 50
Part casks.....6 50 7 00

LEAD.
Imported Pig, per 100 lb.....3 20 3 30
Bar, per lb.....0 05
Sheets, 2½ lb. sq. ft., by roll.....0 06½
Sheets, 3 to 6 lb.0 06

NOTE.—Cut sheets 1c. per lb., extra. Pipe, by the roll, usual weights per yard, lists at 7c. per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe 8-ft. lengths, lists at 8c.

ANTIMONY.
Cookson's.....per lb. 7 50 8 00

SHOT.
Common, \$6.50 per 100 lb.; chilled, \$7.00 per 100 lb.; buck, seal and ball, \$7.50. Discount, 17½ p.c. Prices are f.o.b. Toronto, Hamilton, Montreal, St. John and Halifax. Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.
BATH TUBS.
Zinc.....6 00
Copper, discount 20 per cent. off revised list.

BATHS.
Standard Enameled.
5½-ft. rolled rim, 1st quality.....21 60
5½ " 2nd.....17 85

CLOSETS. Net.
Fittings.....1 00
Plain Simplex Syphon Jet.....9 00
Emb.....9 50

Fittings.....1 25
Low Down Elgin or Teutonic, plain.....6 00
Low emb.....6 50
Connection.....1 25
Plain Richelieu.....4 25
Emb.....4 50

Connections.....1 25
Basins, P.O., 14-in.....0 63
Basins, oval, 17 x 14-in.....1 50
Basins, " 19 x 15-in.....2 00

IRON PIPE.
Black pipe—
1 inch.....1 35
1½ ".....1 35
2 ".....2 15
2½ ".....2 25
3 ".....2 35
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100 ".....2 35

Per 100 feet.
1 inch.....1 35
1½ ".....1 35
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99½ ".....2 35
100 ".....2 35

Bar, half-and-half, guaranteed.....0 19
Bar, half-and-half, commercial.....0 18
Refined.....0 18

WRENCHES.
Acme, discount 35 to 37½ per cent.
Agricultural, discount 60 per cent.
Coe's Genuine, discount 20 to 25 per cent.
Towers Engineer.....each 2 00 7 00
" S.....per doz. 5 80 6 00
G. & K.'s Pipe.....each 3 49
Burrell's Pipe.....each 3 00
Pocket.....per doz. 0 25 2 90

Standard Compression work, dis. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra discount 10 per cent.
Lever handle Stops and Waste, discount 80 per cent. With, in lots of 2 dozen and over an extra discount of 10 per cent.
J.M.T. Globe, Angle and Check Valves, discount 55 per cent.
Standard Globe, Angle and Check Valves, discount 60 per cent.
Kerr's special standard globes and angles, discount 60 per cent.
Kerr's Jenkin disc, copper-alloy disc and heavy standard valves, discount 60 per cent.
Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator valves, discount 70 per cent.
Kerr's Jenkin disc, copper-alloy disc radiator valves, discount 70 per cent.
Kerr's quick-opening hot-water radiator valves, discount 70 and 10 per cent.
Weber's (Kerr) patent straightway gate valves, brass, discount 55 per cent.
Weber's (Kerr) patent straightway gate valves, I.B.B.M., discount 70 per cent.
J.M.T. Radiator Valves, discount 55 per cent.
Standard Radiator Valves, discount 60 per cent.
Patent Quick-Opening Valves, discount 65 per cent.
No. 1 compression bath cock.....net 1 75
No. 4....." 1 90
No. 7 Fuller's....." 2 10
No. 4½....." 2 25
Patent Compression Cushion, basin cock, hot and cold.....per doz. 15 00
Patent Compression Cushion, bath cock, No. 2208.....2 25
Square head brass cocks, discount 55 per cent. Iron " 50 to 60 " \$25.00
Thompson Smoke-test Machine

RANGE BOILERS.
Dominion, 30 gallon.....net 4 75
" 35 ".....5 75
" 40 ".....6 75
Copper, 30 gallon.....22 00
" 35 ".....24 00
" 40 ".....28 00
Discount off copper boilers 15 per cent.

SOLID PIPE AND FITTINGS.
Light soil pipe, discount, 50 per cent.
" fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60 per cent.
7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER. Per lb.
Bar, half-and-half, guaranteed.....0 19
Bar, half-and-half, commercial.....0 18
Refined.....0 18

BEAMS CHANNELS ANGLES PLATES

1,500 TONS FOR SALE

All of this material in lengths from 40 to 60 feet.
We can ship promptly, and should be pleased to receive your order.
Prices and stock lists on application.

STEEL FRAME BUILDINGS and ROOF TRUSSES.

Also Steel Bridges for Railways and Highways.

THE HAMILTON BRIDGE WORKS COMPANY

LIMITED

Long Distance Telephone, Hamilton 630.

HAMILTON, CANADA.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French "	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt.	Less than this
quantity 1c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxide	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
" umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl	9 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorators' Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs.	4 75	
No. 1, 560 lb. casks, per cwt	4 00	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 08	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 50
Pure, kegs.	4 75
No. 1, casks	4 25
No. 1, kegs.	4 50

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
"British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose	1 85
25-lb. tins	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
"orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
"black japan	1 10	1 20
"No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 75	
Granitine floor finish, per gal.	\$1.20	
Maple Leaf coach enamels, size 1, size 2, 70c.; size 3, 40c. each		
Sherwin-Williams' kopal varnish, assorted case, from	1 gal., \$2.50.	

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine		
Strip	0 18	0 20
Coopers	0 19	0 20
Huttner		
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 40 p.c., American.	
Rim Fire Cartridges, Dominion 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 5 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 10 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

per lb.

Best thick brown or grey felt wads, in ½-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8	0 90
5 and 6	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8	1 65
5 and 6	1 90

ADZES.

Discount 20 per cent.

Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

AXES.

Chopping Axes		
Single bit, per doz.	7 00	10 00
Double bit, " "	10 00	18 00
Bench Axes, 40 per cent.		
Broad Axes, 25 per cent.		
Hunters' Axes	5 50	6 00
Boys' Axes	6 25	7 00
Splitting Axes	7 00	12 00
Handled Axes		10 00

AMERICAN AXE AND TOOL CO.
Red Ridge, boys', handled. 5 75
hunters. 5 25

Underhill American Bench Axes, 40 p.c.
Ordinary, per gross 6 00 7 00
Best quality " " 10 00 12 00

BELLS.

Hand.

Brass, 60 per cent.
Nickel, 55 per cent.
American make, discount 63½ per cent.
Canadian, discount 45 and 50 per cent.

Door.

Gongs, Sargent's, 5 50 8 00
"Peterboro", discount 50 and 10 per cent. off new list.

Farm.

American, each 1 25 3 00
House.
American, per lb. 0 35 0 40

BELLOWS.

Hand, per doz. 3 35 4 75
Moulders, per doz. 7 50 10 00
Blacksmiths, discount 40 per cent.

BELTING.

Extra, 60 per cent.
Standard, 60 and 10 per cent.
No. 1, not wider than 6 in., 60, 10 and 10 per cent.

Agricultural, not wider than 4 in., 75 per cent.
BITS.
Auger.
Gilmour's, discount 60 per cent.
Rockford, discount 50 and 10 per cent.
Jennings' Gen., net list.

Car.

Gilmour's, 47½ per cent.
Clark's, 40 per cent.
Clark's, per doz. 0 65 0 90
Diamond, Shell, per doz. 1 00 1 50
Nail and Spike, per gross 2 25 5 20

BLIND AND RED STAPLES.
All sizes, per lb. 0 07½ 0 12

BOLTS AND NUTS

Per cent.

Carriage Bolts, common (\$1 list)	
" 3-16 and ½"	60
" ½-16 and ½"	55 and 5
" 7-16 and up	55
" full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ½ and less	60
Planch Bolts, 7-16 and up	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., 6½ to 6c.	

BOOT CALKS.

Small and medium, ball " " per M. 4 25
Small heel " " 4 50
BRIGHT WIRE GOODS.
Discount 62½ per cent.

BUTCHERS' CLEAVERS.

German	per doz.	6 00	9 00
American	" "	12 00	18 00

BUTCHER KNIVES.

Bailey's	per doz.	0 60	6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll	1 15
Carpet Felt, per ton	45 00
Heavy Straw Sheathing, per ton	35 00
Dry Sheathing, per roll, 400 sq. ft.	0 40
Tar " " 400 "	0 50
Dry Fibre " " 400 "	0 55
Tarred Fibre " " 400 "	0 65
O. K. & I. X. L. " " 400 "	0 70
Resin-sized " " 400 "	0 45
Oiled Sheathing " " 600 "	1 00
Oiled " " 400 "	0 70
Roof Coating, in barrels, per gal.	0 17
Roof " small packages	0 25
Refined Tar, per barrel	5 00
Coal Tar " " 4 00	
Coal Tar, less than barrels, per gal.	0 15
Roofing Pitch, per 100 lb.	1 10

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.90 or 2-inch.

BUTTS.

Wrought Brass, net revised list.

Cast Iron.

Loose Pin, discount 60 per cent.

Wrought Steel.

Fast Joint, discount 65, 10 and 2½ per cent.
Loose Pin, discount 65, 10 and 2½ per cent.
Berlin Bronzed, discount 70, 70 and 5 per cent.
Gen. B. ronzed, per pair 0 40 0 65

CARPET STRETCHERS.

American	per doz.	1 00	1 50
Bullard's	" "		6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.
Plate, discount 52½ to 57½ per cent.

CATTLE LEADERS.

Nos. 32 and 33	per gross	7 50	8 50
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CHALK.

Carpenters' Colored, per gross	0 45	0 75
White lump, per cwt.	0 60	0 65
Red " "	0 05	0 06
Crayon, per gross	0 14	0 18

CHISELS.

Socket, Framing and Firmer.
Broad's, discount 60 and 10 per cent.
Warnock's, discount 50 and 10 per cent.
P. S. & W. Extra, discount 60 and 10 per cent.

FOODS—STOCK.

Colonial Stock Foods, 50c. packages, per doz	\$4 00
" " " 25c. pkgs., " "	2 00
" " " 10c. " " "	75
" " " 25-lb. pail, each	1 30
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz.	1 25
Worm " "	1 25
International 1 Stock Foods, \$1 packages, per doz.	8 00
International Stock Foods, per pail	2 75
" " " " " " "	10 50
" Poultry " \$1 pkgs. per doz.	8 00
" Worm Powders, 50c. pkgs.	4 00
" Pine Healing Oil, per doz.	8 00
" Pheno-Chloro, \$1 pkgs., per doz	8 00
" Roof Ointment	8 00
" Compound Absorbent	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.	

CLIPS.

Axle, discount 65 per cent.

Two Paper Mills and Three Factories Busy

making Paterson's Wire-Edged Ready Roofing, Building Papers and Roofing Felts.

Our success is due to the fact that we make the goods the people want, and our customers know their orders will be promptly and carefully filled.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.

Plain or Corrugated.

2-inch	per 100 feet	3 00
3 "	"	4 00
4 "	"	5 25
5 "	"	6 75
6 "	"	9 00

CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	per pair	0 17½
S. & D., " 5	"	0 22½
S. & D., " 6	"	0 15
Boynton pattern	"	0 20

DOOR SPRINGS.

Torrey's Rod	per doz.	1 75
Coil, 9 to 11 in.	"	1 65
English	"	2 00

DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Miller's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.
Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAVETROUGHS.

10-inch per 100 ft. | 10 00 |

ELBOWS (stovepipe.)

5 and 6-inch, common	per doz.	1 20
Polished, 15c. per dozen extra	"	1 35

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western	70 and 10 per cent.	
Arcade	70 " 10 "	
Kearney & Foot	70 " 10 "	
Diston's	70 " 10 "	
American	70 " 10 "	
J. Barton Smith	70 " 10 "	
McClellan	70 " 10 "	
Eagle	70 " 10 "	
Nicholson, 60 and 10 to 60, 10 and 5	"	
Royal	80 " 75 "	
Globe	70 to 75 "	
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.	"	
Jowitt's, English list, 25 to 27½ per cent.	"	
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50	"	

GLASS.

Window. Box Price.

Size United Inches.	Per 50 ft.	Star	Per 100 ft.	D. Diamond	Per 100 ft.
Under 26	3 80		5 06		
26 to 40	4 00		5 44		
41 to 50	4 50		6 56		
51 to 60	4 75		7 50		
61 to 70	5 00		8 62		
71 to 80	5 30		9 38		
81 to 85			10 75		
86 to 90			12 30		
91 to 95			15 00		
96 to 100			18 00		
Discount 15 per cent.					

GAUGES.

Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33 each | 1 65 | 2 40 |

GILLET'S POWDERED LYE.

1-case, \$3.60; 3-case, \$3.50; 5-case and over, \$3.40.

HALTERS.

Rope, 1-inch	per gross	12 00
Rope, 1 1/2-inch	"	9 00
Rope, 2-inch	"	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1 1/2-inch	"	5 20
Web	"	2 45

HATCHETS.

Shingle, Red Ridge 1, per doz.	4 40
" 2, "	4 85
Barrel, Underhill	5 00

HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

Tack.

Magnetic per doz. | 1 10 | 1 20 |

Sledge.

Canadian per lb. | 0 07½ | 0 08½ |

Ball Peen.

English and Canadian, per lb. 0 22 | 0 25 |

HANDLES.

Axe, 2nd growth, per doz. net	3 00	4 00
tore door..... ..per doz.	1 00	1 50

Fork.

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

American per doz. | 1 00 | 1 25 |

Plane.

American per gross | 3 15 | 3 75 |

Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

Steel barn door	8 00	10 00
Stearns, 4-inch	4 50	
" 5-inch	6 00	
Zenith	9 00	

Larc's covered.

No. 11, 10-foot run	10 80
No. 12, 10-foot run.....	12 60
No. 14, 15-foot run.....	21 00
Steel, covered.....	4 00
track, 1 x 3-16 in(100 ft)	3 75
" " 1½ x 3-16 in(100 ft)	4 75

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½ |

" " 5-in., " 0 06½ |

" " 6-in., " 0 06½ |

" " 8-in., " 0 05½ |

" " 10-in., " 0 05½ |

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in. per 100 lb. | 4 50 |

12 in. up " | 3 25 |

Spring, No. 20, per gro. pairs 10 50 |

HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter per doz. | 4 00 | 4 50 |

HOLLOW WARE.

Tinned cast, 35 per cent.

HOOKS.

Cast Iron.

Bird cage per doz. | 0 50 | 1 10 |

Clothes line, No. 61	"	0 00	0 70
Harness	"	0 60	12 00
Hat and coat	per gro.	1 10	10 00
Chandelier	per doz.	0 50	1 00

Wrought Iron.
Wrought hooks and staples Canadian discount 60 per cent.

Wire.
Hat and coat, discount 60 per cent.
Belt per 1,000 | 0 60 |

Screw, bright, discount 60 per cent.

HORSE NAILS.

"C" brand, 40, 10 and 7½ per cent. off list { Oval
"M" brand, 55, per cent. { head
Countersunk, 57½ per cent.
"Monarch," 50 and 7½ per cent.
"Peerless," 50 per cent. dis.

HORSESHOES.

	F.O.B. Montreal	No. 2	No. 1
		and	and
		larger	smaller

Iron Shoes.

Light, medium and heavy 3 65 | 3 90 |

Snow shoes 3 90 | 4 15 |

Steel Shoes.

XL, sizes 1 to 5	5 35
Light, No. 2 and larger	3 80
No. 1 and smaller	4 05
Featherweight, all sizes 0 to 4	5 35
Toeweight, all sizes 1 to 4	6 69

JAPANNED WARE.

Discount 50 per cent.

ICE PICKS.

Star per doz. | 00 | 3 25 |

KETTLES.

Brass spun 7½ per cent. discount off new list.
Copper per lb. | 0 30 | 0 50 |

American, 60 and 10 to 65 and 5 per cent.

KEYS.

Lock, Canadian dia. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock.

American per gross | 0 60 |

KNOBS.

Door, japanned and N.P., per doz.	1 50	2 50
Bronze, Berlin	2 75	3 25
Bronze, Genuine	6 00	9 00

Shutter, porcelain, F. & L. screw per gross | 1 30 | 2 00 |

White door knobs per doz. | 2 00 |

HAY KNIVES.

Net prices.

LAMP WICKS.

Discount, 60 per cent.

LANTERNS.

Cold Blast	per doz.	7 00
No. 3, "Wright's"	"	8 50
Ordinary, with O burner	"	4 00
Dashboard, cold blast	"	9 00
No. 0	"	5 75

LEMON SQUEEZERS.

Porcelain lined	per doz.	2 20	5 60
Galvanized	"	1 87	3 85
King, wood	"	2 75	2 90
King, glass	"	4 00	4 50
All glass	"	0 50	0 90

LINE.

Fish	per gross	1 05	2 50
Chalk	"	1 90	7 40

LAWN MOWERS.

Woodyatt, 10½-in. wheel, 14-in. cut ..	8 50
Star, 9-in. "	7 00
Daisy, 8-in. "	(net) 2 87½
Philadelphia, 7½-in. "	7 00
Ontario, 7½-in. "	15 80
King Edw'd, 12-in. "	9 50

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:

10½-in. high wheel	7 50	10 00
9-in. "	5 50	6 25
8-in. "	4 90	5 50

Discount 50 per cent.

LOCKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwin per doz. | |

Cabinet.
Eagle, discount 30 per cent.

Padlocks.
English and Am. per doz. | 0 50 | 6 00 |

Eagle, discount 20 to 25 per cent.

MACHINE SCREWS.

Iron and Brass.
Flat head, discount 25 per cent.
Round head, discount 20 per cent.

MALLETS.

Tinsmiths'	per doz.	1 25	1 50
Carpenters', hickory, "	"	1 25	3 75
Lignum Vitae	"	3 85	5 00
Caulking, each	"	0 60	2 00

MATTOCKS.

Canadian per doz. | 5 50 | 6 00 |

MEAT CUTTERS.

American, discount 3½ per cent.
German, 15 per cent.
Gem each | 1 15 |

MILK CAN TRIMMINGS.

Discount 25 per cent.

NAILS.

	Cut.	Wire.
2d and 3d	3 30	3 45
3d	2 95	3 12
4 and 5d	2 70	2 85
6 and 7d	2 60	2 80
8 and 9d	2 45	2 60
10 and 12d	2 40	2 55
16 and 20d	2 35	2 50
30, 40, 50 and 60d (base)	2 30	2 45

Cut nails in carlots 5c. less.

Wire nails in carlots are \$2.40.

Steel cut nails 10c. extra.

Miscellaneous wire nails, discount 15 per cent.

Coopers' nails, discount 30 per cent.

NAIL PULLERS.

German and American 1 75 | |

U.M.C. The New 33 Primers

give an added ballistic value to the powder and shot charges in all U. M. C. smokeless powder shells.

THE NO. 3 U. M. C. PRIMERS

were the first and best primers for smokeless powder ever made here or abroad—until the advent of the new U.M.C. 33 primers, which were substituted for them some time ago.

The U.M.C. Southern Squad used shells primed with the new 33 primers.

The Union Metallic Cartridge Co.

Agency, 313 Broadway, New York, N.Y.

Factory, BRIDGEPORT, CONN.

PLANE IRONS.			SAP SPOUTS.			STAPLES.			ENAMELLED WARE.		
English	per doz.	2 00 5 00	Bronzed iron with hooks	per 1,000	7 50	Galvanized	3 00		White, Princess, Turquoise, Blue and White		
PLIERS AND NIPPERS.			"Eureka" tinned steel, hooks "		8 00	Plain	2 80		discount 50 per cent.		
Button's genuine, per doz. pairs, discount			SAWS.			Coopers', discount 45 per cent.			Diamond, Famous, Premier, discount 50 and		
37½ to 40 per cent.			Hand, Disston's, discount 12½ per cent			Poultry netting staples, discount 40 per cent.			10 per cent.		
Button's imitation	per doz.	5 00 9 00	S. & D., discount 40 per cent.			STOCKS AND DIES.			Granite or Pearl, Imperial, Crescent, discount		
German	"	0 60 60	Crosscut, Disston's	per foot	0 35 0 55	STONE.			50, 10 and 10 per cent.		
PRESSED SPIKES.			S. & D., discount 35 per cent. on Nos. 2 and 3.			Washita	per lb.	0 28 0 60	Premier steel wire, 40 per cent.		
Discount 20 per cent.			Hack, complete	each	0 75 2 75	Hindustan	"	0 06 0 07	"Star" decorated steel and decorated white,		
PULLEYS.			Hack, frame only	each	0 50 1 25	slip	"	0 09 0 13	25 per cent.		
Hothouse	per doz.	0 55 1 00	SASH WEIGHTS.			Labrador	"	0 15 0 30	WIRE.		
Axle	"	0 22 0 33	Sectional	per 100 lb.	2 00 2 25	Turkey	"	0 30 0 30	Smooth Steel Wire.		
Screw	"	0 27 1 00	Solid	"	1 50 1 75	Arkansas	"	1 50 1 10	No. 0-9 gauge		
Awning	"	0 35 2 50	SASH CORD.			Water-of-Ayr	"	0 10 0 10	10	6c. extra.	
PUMPS.			Per lb.		0 28 0 30	Seythe	per gross	3 50 5 00	11	12c. "	
Canadian cistern	1 80 3 60		SAW SETS.			Grind, 2-in., 40 to 200 lb., per ton		25 00	12	20c. "	
Canadian pitcher spout	1 40 2 10		Lincoln and Whiting		4 75	" under 40 lb., "		28 00	13	30c. "	
PUNCHES.			Hand Sets, Perfect		4 00	" under 2 in. thick, "		29 00	14	40c. "	
Saddler's	per doz.	1 00 1 85	X-Cut Sets,		7 50	STOVEPIPES.			15	55c. "	
Conductor's	"	3 00 15 00	SCALES.			5 and 6 inch, per 100 lengths		7 00	16	70c. "	
Pinner's, solid	per set	0 72	Gurney Standard, 40 per cent.			7 inch		7 50	ENAMEL STOVE POLISH.		
" hollow	per inch	1 00	Gurney Champion, 50 per cent.			No. 4, 3 doz. in case, net cash		4 80	TACKS, BRADS, ETC.		
RAKES.			Burrow, Stewart & Milne—			No. 6, 3 doz. in case		8 40	Carpet tacks, blue	80 and 15	
Wood	per doz. net	1 20 20	Imperial Standard, discount 40 per cent.			CUT TACKS, blue, in dozens only			" "tinned	80 and 20	
RAZORS.			Weight Beams, discount 35 per cent.			" " (in kegs)		40	" "brush, blue and tinned	60	
Elliot's	per doz.	4 00 18 00	Champion Scales, discount 50 per cent.			Cut tacks, blue, in dozens only		60	Swedes cut tacks, blue and tinned—	80 and 10	
Geo. Butler's & Co.'s	"	4 00 18 00	Fairbanks standard, discount 35 per cent.			½ weights		60	In bulk	80 and 10	
Boker's	"	7 50 11 00	" Dominion, discount 55 per cent.			In dozens		75	In dozens	75	
" King Cutter	"	12 50 15 00	" Richelieu, discount 55 per cent.			Swedes, upholsterers', bulk		85, 12½ and 12½	Swedes, upholsterers', bulk	85, 12½ and 12½	
Wade & Butcher's	"	3 60 10 00	Warren's new Standard, discount 40 per cent.			brush, blue and tinned		70	In bulk	70	
Thiele & Quack's	"	7 00 12 00	" Champion, discount 50 per cent.			Swedes, gimp, blue, tinned and		75 and 12½	japanned	75 and 12½	
Carbo Magnetic	"	15 00	" Weightbeams, discount 35 per cent.			Zinc tacks		35	Leather carpet tacks	35	
Griffon Barber's Favorite	"	10 75	SCREW DRIVERS.			Copper tacks		50	Copper tacks	50	
Griffon No. 65	"	13 00	Sargent's	per doz.	0 65 1 00	Copper nails		52½	Trunk nails, black	65 and 5	
Griffon Safety Razors	"	13 50	SCREEN DOORS.			Clout nails		65 and 10	Trunk nails, tinned	65 and 10	
Griffon Strapping Machines	"	13 50	Common doors, 2 or 3 panel, walnut			Chair nails		40	Patent brads	40	
Lewis Bros. "Klean Kutler"	"	8 50 10 50	stained, 4-in. style	per doz.	6 50	Fine finishing		40	Lining tacks, in papers	10	
REGISTERS.			Common doors, 2 or 3 panel, yellow and			Finishing		15	" "in bulk	15	
Discount 40 per cent.			green stained, 4-in. style	per doz.	6 75	Patent brads		15	" "solid heads, in bulk	75	
RIVETS AND BURRS.			Common doors, 2 or 3 panel, in natural			Patent brads		15	Saddle nails, in papers	10	
Iron Rivets, black and tinned, discount 60 and			colors, oil finish	per doz.	8 75	Patent brads		15	" "in bulk	15	
10 per cent.			3-in. style 20c. per dozen less.			Patent brads		15	Tufting buttons, 22 line, in doz-		
Iron Burrs, discount 55 per cent.			SCREWS.			Patent brads		15	ens only	60	
Extras on Iron Rivets in ¼-lb. cartons, 1c.			Wood, F. H., bright and steel, discount 87½			Patent brads		15	Zinc glaziers' points	5	
per lb.			per cent.			Patent brads		15	Double pointed tacks, papers	90 and 10	
Extras on Iron Rivets in ¼-lb. cartons, 1c.			Wood, R. H., bright, dis. 82½ per cent.			Patent brads		15	" "bulk	40	
per lb.			" F. H., brass, dis. 80 per cent.			Patent brads		15	Clinch and duck rivets	45	
Copper Rivets, with usual proportion burrs, 45			" R. H., dis. 75 per cent.			Patent brads		15	TAPE LINES.		
per cent. discount. Cartons, 1c. per lb.			" F. H., bronze, dis. 75 per cent.			Patent brads		15	English, ass skin	per doz.	2 75 5 00
extra, net.			" R. H., dis. 70 per cent.			Patent brads		15	English, Patent Leather	5 50 9 75	
Copper Burrs only, discount 30 and 10 per cent.			Drive Screws, dis. 87½ per cent.			Patent brads		15	Chesterman's	each	0 90 2 85
Extras on Tinned or Coppered Rivets, ¼-lb.			Bench, wood	per doz.	3 25 4 00	Patent brads		15	" steel	each	0 80 8 00
cartons, 1c. per lb.			iron		4 25 5 00	Patent brads		15	TINNERS' SNIPS.		
RIVET SETS.			Square Cap, dis. 50 and 5 per cent.			Patent brads		15	Per doz	3 00 15 00	
Canadian, discount 35 to 37½ per cent.			Hexagon Cap, dis. 45 per cent.			Patent brads		15	Tin case and dairy, discount 75 to 75 and 10		
ROPE, ETC.			SCYTHES.			Patent brads		15	per cent.		
Sisal	0 104		Per doz. net	6 00 9 00		Patent brads		15	THERMOMETERS.		
Pure Manila	0 134		SCYTHE SNATHS.			Patent brads		15	Game, Newhouse, discount 25 per cent.		
"British" Manila	0 12		Canadian, discount 40 per cent.			Patent brads		15	Game, H. & N. P. S. & W., 65 per cent.		
Cotton, 3-16 inch and larger	0 204		SHARPERS.			Patent brads		15	Game, steel, 72½, 75 per cent.		
" 5-32 inch	0 25 0 27		Bailey Cutlery Co., full nickled, discou			Patent brads		15	TRAPS (steel.)		
" 1 inch	0 25 0 28		and 2½ per cent.			Patent brads		15	Game, Newhouse, discount 25 per cent.		
Russia Deep Sea	0 15		Bailey Cutlery, Japan Handles, discount 67½			Patent brads		15	Game, H. & N. P. S. & W., 65 per cent.		
Rute	0 08		per cent.			Patent brads		15	Game, steel, 72½, 75 per cent.		
Lath Yarn, single	0 104		Seymour's, discount 50 and 10 per cent.			Patent brads		15	TROUSERS.		
" double	0 11		SHOVELS AND SPADES.			Patent brads		15	Disston's, discount 10 per cent.		
Sisal bed cord, 48 feet	0 65		Canadian, discount 45 per cent.			Patent brads		15	German	per doz.	4 75 6 00
" 60 feet	0 80		SINKS.			Patent brads		15	S. & D., discount 35 per cent.		
" 72 feet	0 95		Cast iron, 16 x 24		0 85	Patent brads		15	TWINS.		
RULES.			" 18 x 30		1 00	Patent brads		15	Bag, Russian	per lb.	0 27
Boxwood, discount 55 per cent.			" 18 x 36		1 40	Patent brads		15	Wrapping, cotton, 3-ply	0 24	
Ivory, discount 37½ to 40 per cent.			SNAPS.			Patent brads		15	" 4-ply	0 27	
SAD IRONS.			Harness, German, discount 25 per cent.			Patent brads		15	Mattress	per lb.	0 33 0 45
Mrs. Potts, No. 55, polished	per set	0 80	Lock, Andrews	4 50 11 50		Patent brads		15	Staging	0 27 0 35	
No. 50, nickle-plated	"	0 90	SOLDERING IRONS.			Patent brads		15	VISES.		
Common, plain	4 50		1, 1½-lb.	per lb.	0 37	Patent brads		15	Wright's	0 134	
" plated	5 50		2-lb. or over	"	0 34	Patent brads		15	Brook's	0 124	
SAND AND EMERY PAPER.			SQUARES.			Patent brads		15	Pipe Vice, Hinge, No. 1	3 50	
B. & A. sand, discount, 40 and 5 per cent.			Iron, No. 493	per doz.	2 40 2 55	Patent brads		15	" No. 2	5 50	
Emery, discount 40 per cent.			No. 494	"	3 25 3 40	Patent brads		15	Saw Vice	4 50 9 00	
Garnet (Rurton's) 5 to 10 per cent. advance			Steel, discount 60 to 60 and 5 per cent.			Patent brads		15	COLUMBIA HARDWARE CO.		
on list.			Try and Bevel, discount 50 to 52½ per cent.			Patent brads		15	Blacksmith's (discount) 60 per cent.		
STAMPED WARE.			Plain, discount 75 and 12½ per cent. off re-			Patent brads		15	parallel (discount) 45 per cent.		
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			Retained, discount 75 per cent. off revised list.			Patent brads		15			

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MANUFACTURERS PROTEST.

AT a recent meeting of the Finance Committee of Montreal City Council, a letter was read from the Montreal branch of the Canadian Manufacturers' Association, protesting against the new \$5 tax imposed by the city on users of electric, gas, gasoline, or other motors, except steam, and the \$5 tax on those who keep oils, petroleum and benzine in storage. In the letter the manufacturers state that the tax would be levied on a very large percentage of Montreal manufacturers, and for this reason industrial development would be hampered instead of encouraged by the city. Then by placing the tax on users of motors of all kinds their use would be discouraged, whereas for the cleanliness of the city their use should be encouraged.

The Finance Committee turned the letter over to a sub-committee for a report.

TRANSPORTATION AT WORLD'S FAIR.

As no gasoline automobiles are allowed within the gates of the St. Louis exhibition grounds, the electric automobile has a field almost entirely to itself. A company with a large number of these is operating at the present time, and expects to have over a hundred within a short time. A charge of twenty-five cents only is made for taking visitors

around the grounds. Some of the larger vehicles will seat as many as forty people, and this promises to be a popular manner in which to get a general survey of the grounds, and the exterior of the buildings. A trip in an electric launch is one of the pleasures of the exhibition, and in one of these, of which there are thirty-five, a journey of two and a-half miles can be made, through the Grand Basin, across the base of the Cascades, around the Palaces of Electricity and Education, and past the Machinery, Varied Industries, Manufacturers, Mining and German Buildings. These electric launches travel at the rate of four and a-half miles an hour, and make the circuit in half an hour.

AUSTRALIAN BONUSES ON STEEL.

THE bill to grant bonuses for steel ore just introduced by the Minister of Customs goes under the fine sounding title of the Manufacturers' Encouragement Bill, and a bright prospect was held out to labor when the bill was introduced, as it was pointed out that, before any subsidy falls to be paid, from two to two and a-half million sterling will have been spent on plant, while the bill limits the aggregate of bonuses to be paid to a total of

£324,000. In view of the latter, the former capital expenditure is never likely to be realised. Manufacturers are not at all likely to spend two and a-half million to earn a problematic £324,000—problematic because opinion in Australia is proverbially fickle, particularly on bonuses. But there is one more surety in the bill against its success. It is the new feature in the scheme of a year ago. Now bounties are to be granted on the condition that the manufacturer shall assign to the state the lands, buildings, plant, machinery, appliances and materials used in the manufacture, and the state will thus own the iron and steel works when they prove successful. Of course, the manufacturer will be compensated by agreement or arbitration; but it is all a case of "heads I win, tails you lose." On pig-iron from native ore 12s. per ton is to be paid until 1st July, 1909, or until £250,000 has been exhausted; on spelter also from Australia ores £20,000 is to be disbursed at £2 per ton, the subsidy here terminating on 1st July, 1907; 10 per cent. is to be paid on the value of galvanized iron, wire netting, iron and steel tubes, or pipes not more than 6 in. internal diameter, the maximum aggregate being £50,000, and the duration until July, 1907. For reapers and binders the subsidy on the first 500 made is to be £8 each up till January, 1906.—Iron and Steel Trades Journal.

CLASSIFIED LIST OF ADVERTISEMENTS.

Accountants and Auditors.

Barber, Henry & Co., Toronto.
 Fahy, Wm., Toronto.
 Hoskins, David, Toronto.
 Jenkins & Hardy, Toronto.
 K. dd, F. H., Toronto.
 Merson, Geo. O., Toronto.
 Williamson, T. G., Toronto.

Anvils.

Taylor-Forbes Co., Guelph, Ont.

Art Glass.

St. George, H. E., London, Ont.

Axes, Hatchets, Scythes, etc.

American Axe and Tool Co., Montreal.
 Dundas Axe Works, Dundas, Ont.

Babbitt Metal.

Canada Metal Co., Toronto.
 Fairbanks Co., Montreal and Toronto.
 Langwell's, Montreal.
 Syracuse Smelting Works, Montreal.

Barristers, Solicitors, etc.

Atwater, Duclos & Chauvin, Montreal.
 Beatty, Blackstock, Fasken & Riddell, Toronto.
 Burritt, James H., K.C., Pembroke, Ont.
 Cameron, D. O., Toronto.
 Hamilton, J. C., Toronto.
 Tupper, Phippen & Tupper, Winnipeg.
 Vidal, I. L. O., Montmagny and Quebec.

Belting, Hose, etc.

Canadian Rubber Co., Montreal and Toronto.
 Dominion Belting Co., Hamilton.
 Gutta Percha and Rubber Mfg. Co., Toronto.
 Pullman Mfg. Co., Rochester, N.Y.
 Sadler & Haworth, Montreal & Toronto.

Bicycles and Sundries.

Millen, John, & Son, Montreal.

Bird Cages.

Wright, E. T., & Co., Hamilton.

Brass Goods.

Jones & Barclay, Birmingham.
 Lewis, Rice, & Son, Toronto.
 Morrison, Jas., Brass Mfg. Co., Toronto.
 Nicklin, J., & Co., Birmingham, Eng.
 Penberthy Injector Co., Windsor, Ont.
 Taylor-Forbes Co., Guelph, Ont.

Brushes and Brooms.

United Factories, Toronto.

Carpenters' and Builders' Tools and Supplies.

Atkins, E. C., & Co., Indianapolis, Ind.
 Baynes, Chas., Blackburn, Eng.
 Bliss, R., Mfg. Co., Pawtucket, R.I.
 Covert Mfg. Co., West Troy, N.Y.
 Fairbanks Co., Montreal and Toronto.
 Howland, H. S. Sons & Co., Toronto.
 Hyde, F., & Co., Montreal.
 Ives, H. R., Co., Montreal.
 Lamplough, F. W., & Co., Montreal.
 Lewis Bros. & Co., Montreal.
 Lewis, Rice, & Son, Toronto.
 Lufkin Rule Co., Saginaw, Mich.
 McNally, W., & Co., Montreal.
 Merrick, Anderson & Co., Winnipeg.
 Metal Shingle & Siding Co., Preston, Ont.
 Metallic Roofing Co., Toronto.
 Newman & Sons, Birmingham.
 North Bros. Mfg. Co., Philadelphia, Pa.
 Ontario Tack Co., Hamilton, Ont.
 Ormsby, A. B., & Co., Toronto.
 Pedlar People, Oshawa, Ont.
 Phillips, Chas. D., Newport, Eng.
 Smith & Hemenway Co., New York.
 Stanley Rule & Level Co., New Britain, Conn.
 Taylor-Forbes Co., Guelph, Ont.
 Wilcox Mfg. Co., London, Ont.

Carriage and Waggon Accessories.

Covert Mfg. Co., West Troy, N.Y.

Cash Registers.

Hallwood Cash Register Co., Toronto.

Churns.

Maxwell, David, & Sons, St. Marys.

Clippers—All Kinds.

American Shearer Mfg. Co., Nashua, N.H.
 Barton-Gillette Horse Clipping Co., London, Eng.
 Boker, Henry, Montreal.
 Burman & Sons, Birmingham, Eng.

Cordage.

Brantford Cordage Co., Brantford.
 Canadian Cordage and Mfg. Co., Peterborough, Ont.
 Consumers' Cordage Co., Montreal.
 Hamilton Cotton Co., Hamilton.

Corundum.

Canada Corundum Co., Toronto.

Cutlery—Razors, Scissors, etc.

Birkett, Thos., & Son Co., Ottawa.
 Boker, Henry, Montreal.
 Butler, Geo., & Co., Sheffield, Eng.
 Heinisch's, R., Sons Co., Newark, N.J.
 Lamplough, F. W., & Co., Montreal.
 Silberstein, A. L., New York.
 Smith & Hemenway Co., New York.
 Walter, E. F., & Co., Montreal.
 Wiebusch & Hilger, New York.

Educational.

Belleville Business College, Belleville.
 Canadian Corr. College, Toronto.
 St. Margaret's College, Toronto.
 Willis Business College, Ottawa, Ont.
 Western Business College, Toronto.

Electric Fixtures.

Morrison James, Mfg. Co., Toronto.
 Munderloh & Co., Montreal.

Electro-Plating.

Sutherland, D., Toronto.

Engravers.

Legg Bros., Toronto.
 Smith, Geo. J., New York.

Files and Rasps.

Barnett Co., G. & H., Philadelphia, Pa.
 Grose, Walter, Montreal.

Financial Institutions.

Bradstreet Co.
 British America Assurance Co., Toronto.
 Canadian Bank of Commerce, Toronto.
 Confederation Life Ass., Toronto.
 Liverpool & London & Globe Ins. Co., Toronto.
 London Guarantee and Accident Ins. Co., Toronto.
 Metropolitan Bank, Toronto.
 Western Assurance Co., Toronto.

Firearms and Ammunition.

Abbey Improved Chilled Shot Co., New-castle-on-Tyne, Eng.
 Hamilton Rifle Co., Plymouth, Mich.
 Harrington & Richardson Arms Co., Worcester, Mass.
 Iver Johnson's Arms and Cycle Works, Fitchburg, Mass.
 Remington Arms Co., Ilion, N.Y.
 Union Metallic Cartridge Co., Bridgeport, Conn.
 Walter, E. F., & Co., Montreal.

Flat Irons.

Ives, H. R., Co., Montreal.

Food Choppers

Enterprise Mfg. Co., Philadelphia, Pa.
 Lamplough, F. W., & Co., Montreal.
 Russell & Erwin Mfg. Co., New Britain, Conn.
 Smith & Hemenway Co., New York.

Gas Lamps and Sundries.

Auer Light Co., Montreal.

Glaziers' Diamonds.

Sharratt & Newth, London, Eng.
 Shaw, A., & Son, London, Eng.

Glue.

Grove Chemical Co., Lancashire, Eng.

Gold Enamel.

Ridout, Geo., & Co., Toronto.

Hardware Specialties.

Erie Specialty Co., Erie, Pa.

Horseshoe Pads.

Canadian Rubber Co., Montreal.

Horseshoes and Nails.

Canada Horse Nail Co., Montreal.
 Peck Rolling Mills, Montreal.

Ice Cutting Tools.

Erie Specialty Co., Erie, Pa.
 North Bros. Mfg. Co., Philadelphia, Pa.

Injectors—Automatic.

Penberthy Injector Co., Windsor, Ont.

Iron Pipe.

Page-Hersey Iron and Tube Co., Guelph.

Iron Pumps.

McDougall, R., Co., Galt, Ont.

Keys.

Millen, John & Son, Montreal.

Lanterns.

Ontario Lantern Co., Hamilton, Ont.
 Wright, E. T., & Co., Hamilton.

Lawn Mowers.

Maxwell, David, & Sons, St. Marys, Ont.
 Taylor-Forbes Co., Guelph, Ont.

Ledgers and Office Stationery.

Briggs Ledger System Co., Toronto.
 Hart & Riddell, Toronto.
 Weese, G. A. & Son, Toronto.

Lumbermen's Supplies.

Birkett, Thos., & Son Co., Ottawa.
 Warnock, Jas., & Co., Galt.

Lye.

Gillett, E. W., Co., Limited, Toronto.

Machinery.

Canada Foundry Co., Toronto.
 Fairbanks Co., Montreal and Toronto.
 Globe Brass Works, Detroit.
 Jardine, A. B., & Co., Hespeler, Ont.
 Kerr Engine Co., Walkerville, Ont.
 Morrow Machine Screw Co., Ingersoll, Ont.
 Ontario Wind Engine and Pump Co., Toronto.
 Penberthy Injector Co., Windsor.

Mantels.

Batty Stove and Hardware Co., Toronto.

Manufacturers' Agents.

Gibb, Alexander, Montreal.
 Philip, David, Winnipeg.

Metals.

Booth Copper Co., Toronto.
 Canada Iron Furnace Co., Midland, Ont.
 Canada Metal Co., Toronto.
 Deseronto Iron Co., Deseronto, Ont.
 Gibb, Alexander, Montreal.
 Ironside, Son & Co., London, Eng.
 Jackson, C. F., & Co., Vancouver, B.C.
 Kemp Mfg. Co., Toronto.
 Leslie, A. C., & Co., Montreal.
 London Rolling Mills Co., London, Ont.
 Lysaght, John, Bristol, Eng.
 Morton, B. K., & Co., Sheffield, Eng.
 Nova Scotia Steel and Coal Co., New Glasgow, N.S.
 Peck Rolling Mills, Montreal.
 Rogers, Henry, Sons & Co., Montreal.
 Samuel, Benjamin & Co., Toronto.
 Thompson, B. & S. H. & Co., Montreal.

Metal Lath.

Metallic Roofing Co., Toronto.
 Pedlar People, Oshawa, Ont.

Metal Polish, Emery Cloth, etc.

Falkiner, H. F., Toronto.
 Oakley, John, & Sons, London, Eng.

Metallic Window Screens.

Cutts, C. M., & Co., Toronto Junction.

Milk Cans and Trimmings.

Davidson, Thos., Mfg. Co., Montreal.
 Kemp Mfg. Co., Toronto.
 McClary Mfg. Co., London, Ont.

Paints, Oils and Glass.

Berry Bros., Detroit and Wallaceburg.
 Canada Paint Co., Montreal.
 Canadian Oil Co., Toronto.
 Consolidated Plate Glass Co., Toronto.
 Dods, P. D., & Co., Montreal.
 Francis-Frost Co., Toronto.
 Henderson & Potts, Montreal and Halifax.
 Imperial Varnish and Color Co., Toronto.
 Jamieson, R. O., & Co., Montreal.
 Lucas, John, & Co., Philadelphia, Pa.
 Luxfer Prism Co., Toronto.
 McArthur, Corneille & Co., Montreal.
 McCaskill, Dougall & Co., Montreal.
 Merrick, Anderson & Co., Winnipeg.
 Nobles & Hoare, London, Eng.
 Queen City Oil Co., Toronto.
 Ramsay & Son, Montreal.
 Ridout, Geo., & Co., Toronto.
 Sherwin-Williams Co., Montreal.
 Standard Paint and Varnish Works, Windsor, Ont.
 Stephens, G. F., & Co., Winnipeg.
 Thorne, R. E., Montreal.

Patent Solicitor.

Cullen, Orlan Clyde, Washington, D.C.

Perforated Sheet Metals.

Canada B. Wire Co., Hamilton.

Plumbers' Supplies.

Jardine, A. B., & Co., Hespeler, Ont.
 Morrison, Jas., Brass Mfg. Co., Toronto.

Portland Cement.

Hanover Portland Cement Co., Hanover, Ont.
 Hyde, F., & Co., Montreal.
 McNally, W., & Co., Montreal.
 Thompson, B. & S. H. & Co., Montreal.

Radiators, Furnaces, Stoves, Tinware, etc.

Adams Co., Dubuque, Iowa.
 Davidson, Thos., Mfg. Co., Montreal.
 Dominion Radiator Co., Toronto, Ont.
 Gurney Foundry Co., Toronto.
 Kemp Mfg. Co., Toronto.
 Merrick, Anderson & Co., Winnipeg.
 Wright, E. T., & Co., Hamilton.

Refrigerators.

Davidson, Thos., Mfg. Co., Montreal.

Roofing Supplies.

Bird, J. A. & W., & Co., Boston.
 Hamilton Mica Roofing Co., Hamilton.
 Jenkin, A. C., Montreal.
 McArthur, Alex., & Co., Montreal.
 Metal Shingle & Siding Co., Preston, Ont.
 Metallic Roofing Co., Toronto.
 Ormsby, A. B., & Co., Toronto.
 Paterson Mfg. Co., Toronto & Montreal.
 Taylor-Forbes Co., Guelph, Ont.

Saws.

Taylor, J. & J., Toronto.

Scales.

Atkins, E. C., & Co., Indianapolis, Ind.
 Fairbanks Co., Montreal and Toronto.
 Gurney Scale Co., Hamilton, Ont.
 Merrick, Anderson & Co., Winnipeg.

Screen Doors and Windows.

United Factories, Toronto.

Screws, Nuts, Bolts.

Canada Foundry Co., Toronto.
 Morrow, John, Machine Screw Co., Ingersoll, Ont.

Sewer Pipes.

Canadian Sewer Pipe Co., Hamilton.
 Hyde, F., & Co., Montreal.
 McNally & Co., Montreal.

Shelf Boxes.

Bennett Mfg. Co., Pickering, Ont.

Shelf Brackets.

Atlas Mfg. Co., New Haven, Conn.

Ship Chandlery.

Lewis, Rice, & Son, Toronto.

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Ontario Silver Co., Niagara Falls.
 Toronto Silver Plate Co., Toronto.
 Standard Silver Co., Toronto.

Spramotors.

Spramotor Co., London, Ont.

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Lewis, Rice, & Son, Toronto.
 Mast, J. M., Mfg. Co., Lititz, Pa.

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Wallace, Barnes Co., Bristol, Conn.

Stamps, Stencils, etc.

Parsons-Irons Co., Toronto.

Steel Castings.

Hamilton Bridge Works, Hamilton.
 Hamilton Steel and Iron Co., Hamilton.
 Montreal Steel Works, Montreal.

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Jackson, C. F., & Co., Vancouver, B.C.
 Morton, B. K., & Co., Sheffield, Eng.
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 International Stock Food Co., Toronto.

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Nickel Plate Stove Polish Co., Chicago.

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 Bowman, John, Hardware & Coal Co., London, Ont.
 Canada Hardware Co., Montreal.
 Caverhill, Learmont & Co., Montreal.
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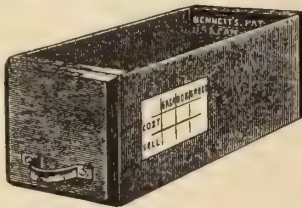
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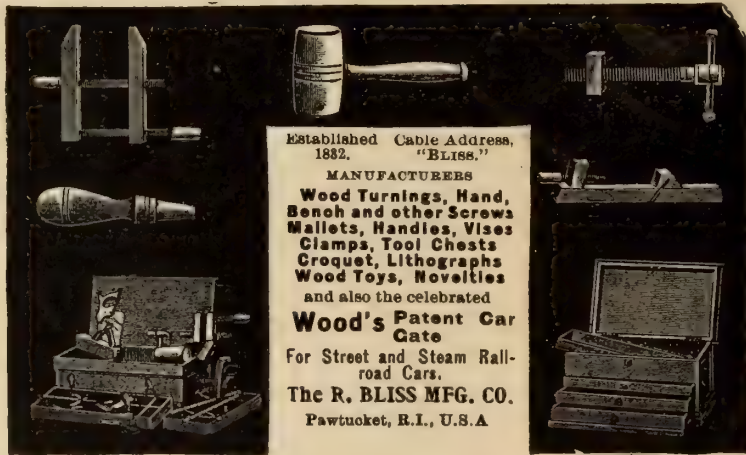
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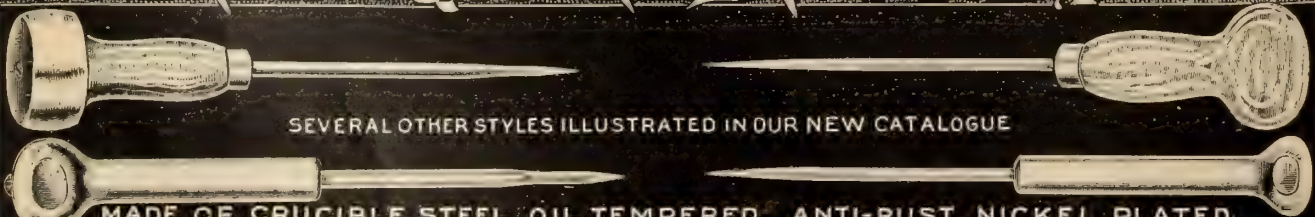
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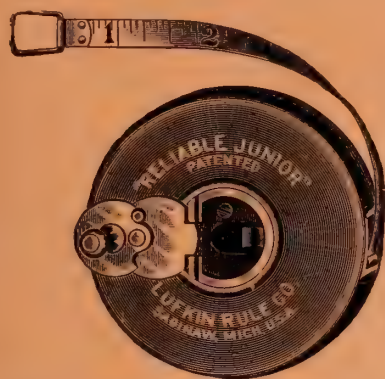
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Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, JUNE 18, 1904.

NO. 25

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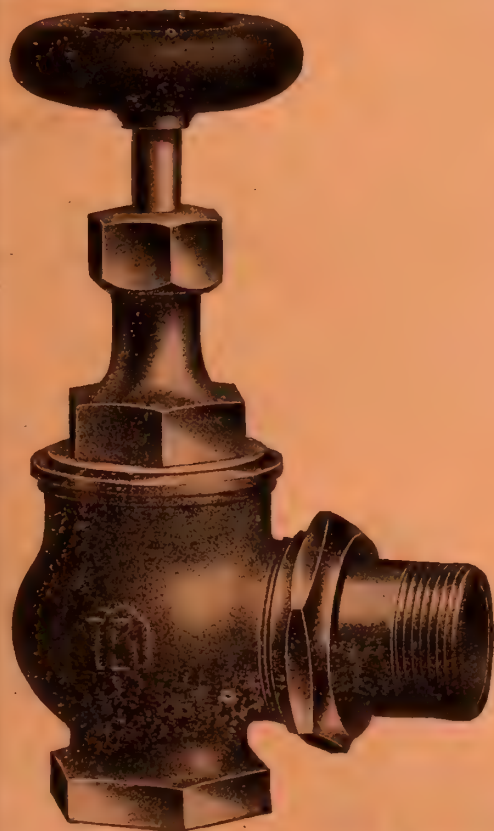
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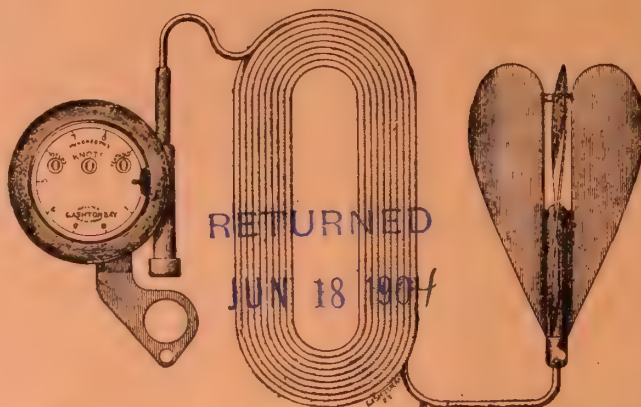


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With Kay's Log you can tell how many miles your boat is making per hour; will register at any speed; weight 6 ounces.

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Art Book 20
Page 49
ans.

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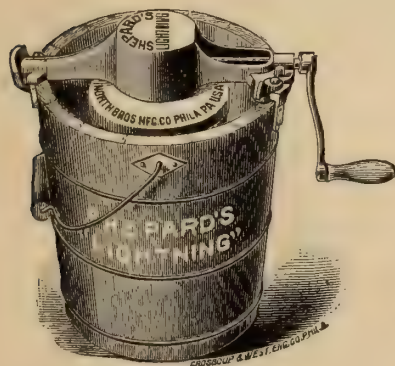
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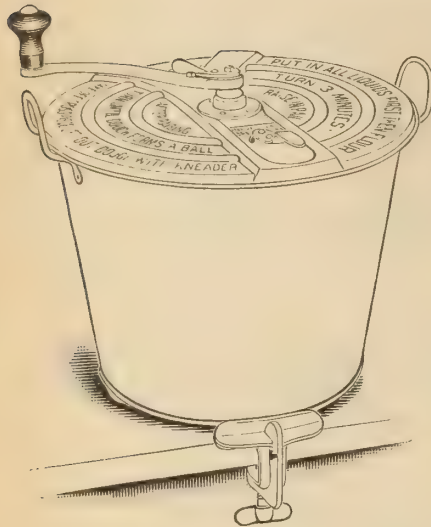
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The Universal Bread Maker

we do so with confidence, knowing it will do all that is said of it.

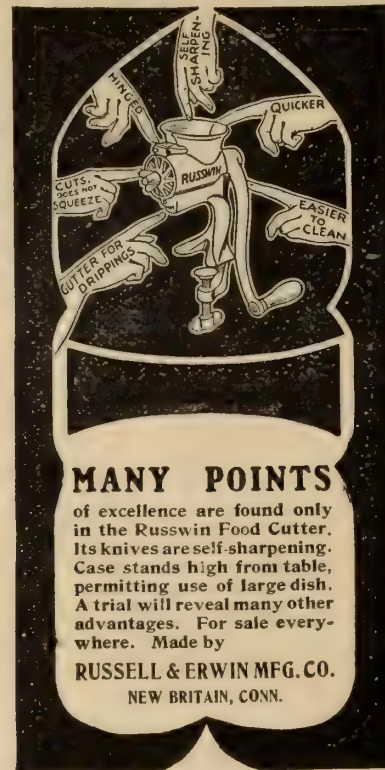
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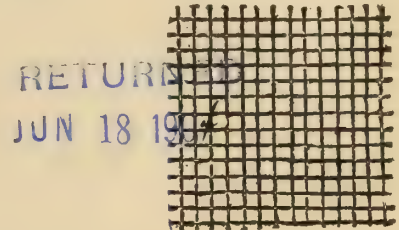
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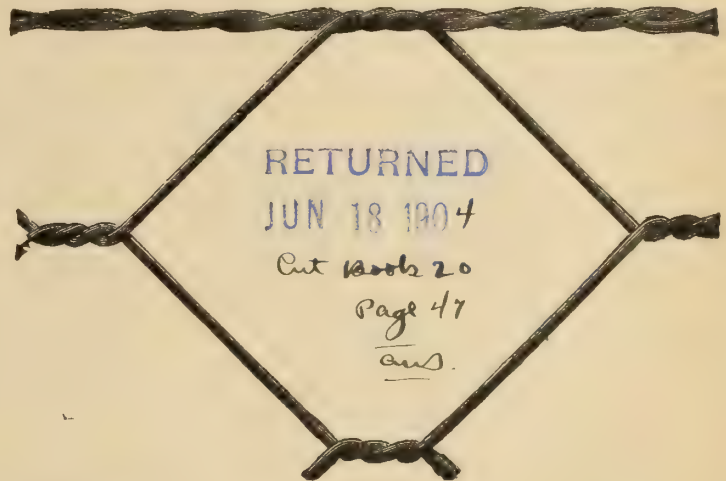
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You cannot make Nails equal to the "C" Brand, except in the same way they are made, and out of the same material. There are no works in Canada that use the same quality of material as is used by us in the manufacture of our Nails. It is made especially for us in Sweden, and represents the highest grade obtainable of Swedish Siemens-Martin Charcoal Steel Nail Rods. This is the best material known in the world, or used by any manufacturer, for the purpose of making Horse Nails.

Our nails are hot forged from the rod, and pointed and finished by a process used exclusively at our works. By reason of their superior designs and hardened needle points, they will drive into the hardest hoof easily and clinch perfectly. They will hold the shoes on longer than any other, and stand the hardest usage to which horse nails are subjected. These facts are admitted and proved by the experience of thousands of Farriers from the Atlantic to the Pacific. It follows that as they are the best, they are the cheapest to buy and use.

Any intelligent Farrier knows perfectly, that upon the quality of the nails used, the reputation and permanence of his work depends; he will, when the facts are fairly presented, use the best if he can get them.

Tell him also that for every 25c. a box less he pays for cheaper brands, that on the average size and quantity used in shoeing a horse ($\frac{1}{2}$ lb. of No. 8) it only reduces the cost of the nails used in shoeing a horse one third of a cent. There is no Farrier but can afford to use the best nails in view of this small difference in cost.

We respectfully request every purchaser of Horse Nails, who is not already a buyer of the "C" Brand, to give them a thorough trial, and test their merits thoroughly, and we feel satisfied that the results will prove all that we claim for them.

We have been making Horse Nails in Canada since 1865, and our experience of 39 years is embodied in every box of nails bearing the "C" Brand and our name. You are sure of getting the best "made in Canada."

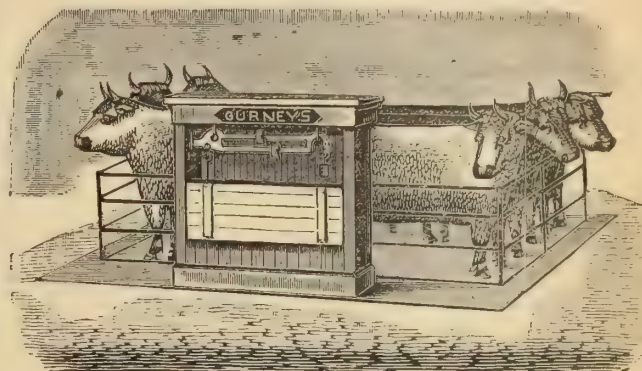
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Absolutely Accurate and Reliable. The Best of Material and Workmanship. Recognized throughout Canada as

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**The BARTON GILLETTE HORSE
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The plates are considerably wider than those supplied with any other Clipper, thus enabling the user to do more work. PATENT ANTI-FRictional LEVERS and BEST FINISH.

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Good Parlor Door Hangers buy the **Wilcox**

They are not the cheapest, but,—they are the Best.

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"ROYAL" MANILA, 650 ft. to the pound.
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Our "ROYAL" Brand of Binder Twine is manufactured of the finest raw material that can be obtained, and with the utmost care. For length and strength we have no competitors. Our twine is manufactured with the latest machinery, and dealers desiring to have exclusive agencies should apply at once.

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N.B.—We also make Hard and Soft Shot but strongly recommend Improved Chilled Shot for penetration.

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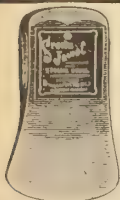
ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and ELECTRO PLATE.**

Ask for our Catalogue and Quotations.

**Dundas Axe Works**

DUNDAS, CANADA.

Write for Prices

P. BERTRAM, - Manager.

STEEL STAMPS

For Manufacturers of
MACHINERY and METALWARE

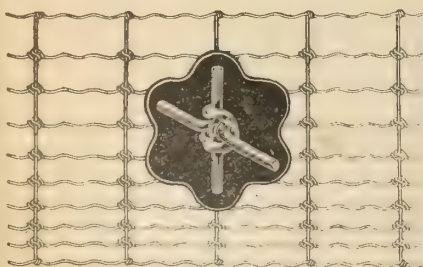
All our work is guaranteed to be satisfactory.

THE PARSONS-IRONS CO.

58 Adelaide St. W., - **TORONTO.**

Your Customers

the farmers are looking for a fence, strong, serviceable and durable at a reasonable cost. You can supply it to them in the

IDEAL

It is strictly up-to-date and the best value to be had in wire fencing to-day.

A GOOD SELLER

We have a style for every purpose in either heavy or light fencing. Write for catalogue showing fencing and gates.

Coiled-Spring Wire

unexcelled in quality, shipped promptly

THE

McGregor-Banwell Fence Co.

Limited

Walkerville, Ont.

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Sole Agents for Manitoba and N. W. T.



This design a guarantee of quality

WRAPPING PAPERS

ALL GRADES AND BEST OF EACH
GREY, RED-BROWN, MANILLA, FIBRE, TEA, ETC.

SAMPLES AND PRICES
FOR THE ASKING.

Canada Paper Co.

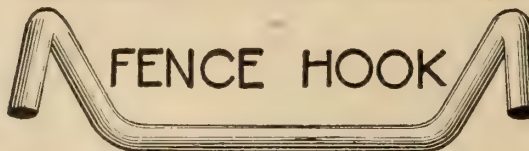
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GALVANIZED FENCE HOOK

FOR FASTENING WOODEN PICKET ON WIRE FENCE.



FENCE HOOK

WIRE NAILS, COILED SPRING, BARB and PLAIN FENCE WIRE, OILED and ANNEALED, CLOTHES LINE WIRE, STAPLES, etc.

THE WESTERN WIRE & NAIL CO., Limited,

LONDON, ONT



"Little Shaver"

Cutest Thing in the Kitchen

Shaves chocolate so thin that it dissolves without stirring.
Slices Potatoes, Radishes, Cucumbers, Onions, Apples and all the smaller fruits and vegetables
Made of black walnut.
Knife is fine tempered steel.

Canadian Agents:

E. H. GRENFELL & CO.
LONDON, ONT.

MADE ONLY BY

J. M. MAST MFG. CO., Lititz, Pa.

SPRINGS

FLAT.—SPIRAL OR VOLUTE

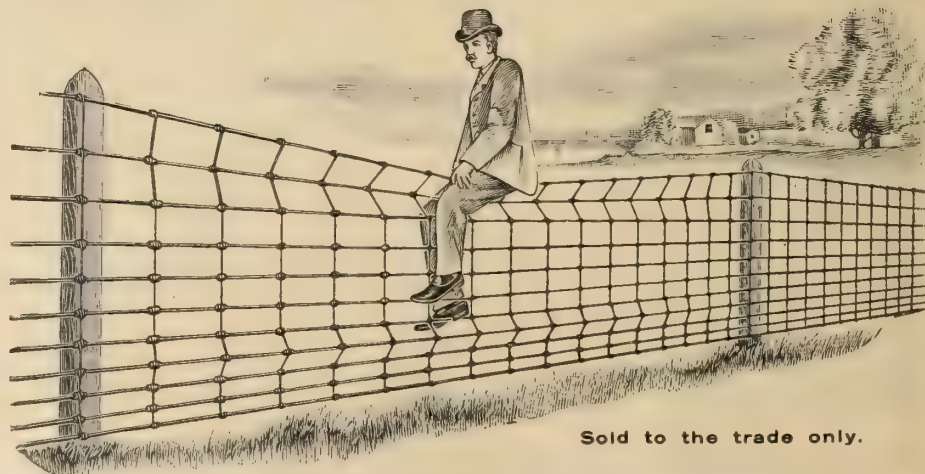
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THE WALLACE BARNES CO.

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THE HINGE IS COMPLETE, AND WORKS WITH THE UTMOST FREEDOM.



Sold to the trade only.

CAVERHILL, LEARMONT & CO., Agents
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Manufactured and sold by
OWEN SOUND WIRE FENCE CO., Limited
Owen Sound, Ont.



**ONEIDA
COMMUNITY'S
WELDLESS
COW TIES.**

Illustration shows

AMERICAN PLAT LINK "OPEN RING" TYPE

Also made in "CLOSED RING," "THREE CHAIN"
and "DOMINION" (or "SHORT") TYPES.

Oneida Community Cow Ties can be had of all the leading jobbers.
We invite correspondence where any difficulty is experienced in
obtaining our goods.

Write for New Catalogue.

Address

ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.

STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

**WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.**

WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
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TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO.

MONTREAL and TORONTO

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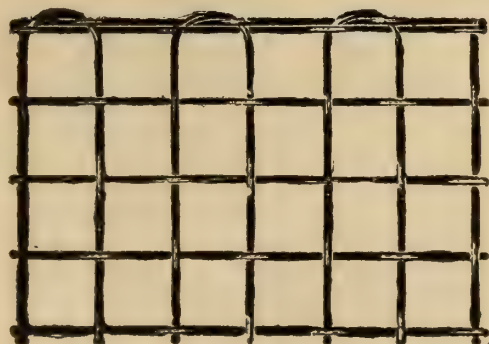
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**BARBED WIRE CALVANIZED PLAIN WIRE
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**Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of
every description; Rail Bonds, Bale Ties, Special Wires for all
purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel
Shafting.**



WIRE CLOTH

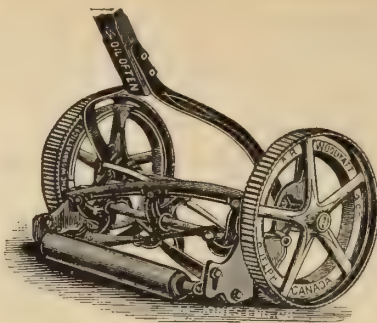
Sand Screens.
Coal Screens.
Cinder Sifters.
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Smoke Stacks.
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And for all purposes.

THE B. GREENING WIRE CO., Limited

Hamilton, Ont.

Montreal, Que.



JUNE IS HALF OVER

Lawn Mower buying time has arrived. Are you equipped? When you want Lawn Mowers in a hurry order ours. We ship the same day as order is received.

Taylor-Forbes Mowers are guaranteed Mowers—nothing better made. Repair parts quickly obtainable. Foreign Made Mowers are dangerous to sell, and troublesome when sold.

ORDER FROM YOUR JOBBER.

WRITE US FOR CATALOGUE "B."

THE TAYLOR-FORBES CO., Limited

Montreal Branch:
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GUELPH, CANADA.

The largest manufacturers of Hardware in Canada.

Kemp's Cold Blast Lanterns

The success which our Lantern has achieved is largely demonstrated by the points of superiority that it possesses.

A Combination Lift and Hinge Lantern.

It is easily adjusted.

Its burning qualities are unexcelled—

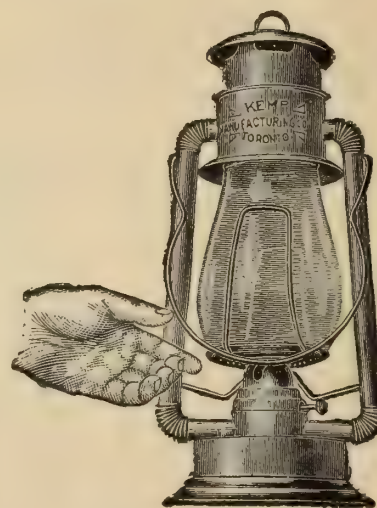
WILL NOT BLOW OUT.

WILL NOT SMOKE.

WILL NOT LEAK.

WILL NOT BREAK GLOBES.

If your customers desire such a lantern, sell them ours.



THEY DO NOT COST MORE THAN OTHER MAKES

KEMP MANUFACTURING CO., TORONTO, CAN.

Electrical Goods in the Hardware Store

BY AN EXPERT

SINCE Hardware and Metal has taken up the question of electrical goods in the hardware store, I have followed with much interest the arguments made. Personally, I have been convinced of the wisdom of hardwaremen paying more attention to this line than they have been doing, and if your space will permit, will give some of my reasons for this belief.

The first question is, does the hardware dealer take an interest in this branch of his business? Does he realize its possibilities? If he does not carry the line, can he give a substantial reason why he does not?

He may say, if he be a city retailer, that competition in that line is too great to start working against. Or he may say that it would not pay him to instal such a line of goods, since there are stores especially devoted to this line, to which the buyers go for their supplies. This, though admittedly a condition to be considered, is not an insurmountable objection. Electrical supplies constitute a paying line; the per cent. profit on these goods is not to be despised, and it is worth the trouble of getting the necessary connection to make the line a profitable one. The end will justify the labor and expense entailed.

The hardwareman in the towns and villages has even more reason than the city retailer for paying attention to this line. He has not the same competition to work against. He may have competition from those who are running the electric plant, but is it keen? In nine cases out of ten it would not be, and even if it is, the competition he has is much easier dealt with than the competition of the city hardwareman. He is a customer of the company running the electric light plant. This company will be willing to oblige him if they can do so without entailing serious loss.

The hardware dealer may arrange with them the per cent. profit he is entitled to, and form an agreement with them that a certain article is to be sold

at a certain price, and at no other. Then he has as good a chance of selling electrical supplies as the electric light company; in fact, a better one. The hardware dealer is in the selling business; the electrical company is not. The former has his regular hardware customers coming and going all the time, while no one visits the electric light concern unless he wants something special done to his lights, or wishes to have lights added. At the best, the latter would get only the pressing demand, while you are in a position to get the general business, and also to create a demand. This can be done to most advantage by direct advocacy of the goods carried, but it can also be done through your advertising columns. Does it not seem reasonable, that the retailer would be able to work up a demand in that way?

Of course, there are some places where there is no electric light plant, and consequently there is no demand for the great majority of electrical supplies. There should be, however, a demand for some lines not connected with lighting, and the hardwareman could handle them without fear of any competition. He would have the field to himself, and its development would depend upon his own ingenuity. Such a line, and perhaps the most important one, is electric bells of all kinds, together with the dry batteries or cells, wire and push-buttons necessary to their installation.

There is another argument in favor of hardwaremen handling electrical supplies, outside the direct profit derived from the goods themselves. It is that selling electrical supplies creates a demand for some hardware lines. Examples of such lines are screws, screw-drivers, pincers, etc., which might be used in the installation of electric bells or some electric fixtures. Buyers of electric bells naturally will purchase the necessities for their installation at the same place.

Then the very general argument which should appeal to all progressive hardwaremen is that by the addition of

this line they are expanding their business. The more goods turned over during the year, the greater is the credit amount at the end of the year. The retailer is doing all in his power to develop his hardware business. Here is a line of goods which offer good profits. The retailer's part is to add it to his hardware stock, and direct part of his aggressiveness to supplying the present demand and to creating a greater demand. Does not this opportunity to extend business appear to every hardware dealer?

Perhaps the best lines of electrical supplies for the hardware merchant to handle are electric light fixtures and electric bells, and their accessories. In the majority of small towns and villages very few electric bells are now in use, so that the hardware dealer has a wide field in which to advocate the superiority of the electric bell over other bells. It is scarcely necessary to point out the convenience of the electric bell in that it can be situated in any part of the house, or there may be two, three or more bells in different parts of the house all rung from the push-button at the door. Then, for other uses than as a door bell, the electric bell is exceedingly handy. Hotel service and factory service may be included in these uses.

Electroliers, or electric light fixtures, however, offer more inducement to the hardwareman than any other line of electric supplies, because electroliers of some kind are requisite where electric lights are used to light a room of any size, and then a demand for other than ordinary fixtures may be cultivated by the merchant. Thus, a customer being in the hardware store has his or her attention called to a handsome fixture displayed there. The customer gets interested, and finally decides to purchase it in order that the appearance of the dining room, sitting room or parlor may be improved. Probably, if the customer's attention had

not been called to the electrolier, the dining room, sitting room, or parlor would have to have been satisfied with what they had.

Incandescent lights themselves compose a good line for the hardware trade, provided that there is no agreement between the electric light company and the consumers that lights burning out be replaced by the company, as is the case in a good many instances. The merchant should know, if such is the case, and if not, the field is open for development.

One or two points are to be observed in the purchase and sale of lamps. The merchant should find from the electric light company the voltage of their circuit, and should stock lamps suited to that voltage. The standard voltages are: 50, 52, 54, 96, 98, 100, 102, 104, 106, 107, 108, 110, 112, 114, 117, 120, 125. The voltages commonly used in large stations are 106, 107, 108 and 114. The lamps most commonly used are 16 c.p. and 32 c.p., taking 3.5 watts per candle power; a 16 c.p. using 4 watts per candle power is also used frequently.

There is another slight difficulty, and that is that the voltage of a circuit falls from the station and the end of the circuit; and, therefore, at different points along the line the voltage will be different, and therefore the same lamp will not give the same satisfaction all along the line. The proper voltage for each particular installation can be readily ascertained by the customer himself after a trial in the following way: The hardwareman supplies him with a lamp of certain candle power to use a certain number of watts. After a run of fifty hours, if there is a noticeable darkness in the glass, the voltage has been too high for the lamp. If such a lamp is used on that circuit its life will be shortened and the candle power will be lessened by the darkened glass. The next lamp the customer buys should be a lamp with a voltage of from 4 to 5 volts higher. If the light is poor, the probability is that the voltage of the circuit is too low for the lamp, and, therefore, the customer's next purchase should be a lamp of from 3 to 4 volts higher voltage.

A few words about lamps of different candle power and different amperage

would help the hardwareman in choosing the lamps best suited to the demands of his customers. Of course, a 32 c.p. lamp will give twice the light that a 16 c.p. light will at the same amperage, and on a circuit of the same voltage. A 16 c.p. lamp, taking 4 amperes, will give more light than a 16 c.p. lamp taking 3.5 amperes on the same circuit, but the life of the lamp will be shorter. The same thing may be said of the 32 c.p. lamp of 3.5 amperage and 4 amperage.

In close connection with electric fixtures and lamps, may be mentioned sockets, cords, hard and soft rubber insulators, etc. These should not be neglected by the hardwaremen. Of these, wire and cord are important. All hardwaremen are familiar with wire and the methods of denoting sizes, and of buying and selling, so that nothing much need be said here about that line. The wire will be supplied to the hardwareman in rolls, and he will pay for so many pounds. He has to retail it generally by the yard or foot, and so, if he is not supplied with information regarding the weight of each size, B. & S. gauge, he will have to measure out so many yards, and find its weight, and figure his profits on that basis.

There are some disadvantages in connection with selling electric fans in towns and villages. One of the chief of these is that fans are used for the most part during the day time, and in the majority of small towns and villages the power station is run only at night, and then not very often during all the night.

The chief uses of a fan are for cooling purposes, or for producing a current of air to prevent show windows freezing. Very little use could be made of them for cooling purposes unless the current was on all day. For the other purpose, they might be used more generally. To put in a stock of fans would consume some capital, and probably would not pay the merchant in the end. A better way would be for the merchant to provide himself with a set of catalogues for reference, keeping one fan in stock for show, and upon receiving the order to send to the supply house for it. The amount of money that otherwise would have to be invested would make doing this worth while.

Another line which might be handled in the same way as was advocated for the fans is electric motors, of small size, and motor-starting rheostats. There are very many uses to which small motors may be adapted, and if the hardwareman has a number of catalogues describing and illustrating the various kinds of motors and their uses, he is in a position to advocate their use to his customers.

Many people are a little afraid of innovations, and departures from established customs, and perhaps not a few hardwaremen are in this condition in regard to starting an electrical supply department. However, "nothing risked, nothing gained" is a true saying, and hardwaremen should take it to heart. There is no occasion to start big, indeed that is a source of danger. Commence modestly and work up to large things. However, if a merchant tries it, let him give it a fair trial, and what a fair trial would be should be apparent to all hardwaremen.

CANADIAN GOODS IN AUSTRALIA.

Mr. Arthur Pratt, of Sydney, Australia, is on a visit to Canada and the United States. Mr. Pratt, who was formerly in the newspaper business in Sydney, has recently started up for himself as a manufacturers' agent and commission merchant, and his trip to this continent is for the purpose of making business connections. He has seen a number of firms in Canada, and has made arrangements with some of them to represent them in Australia. He bears credentials from some of the most influential and best known people in the Commonwealth, and has already made a number of friends on this continent. Before returning to Australia he will visit Great Britain. Mr. Pratt speaks quite hopefully of the out-look for Canadian products in Australia.

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

The Crowe Stoker.

HARDWARE AND METAL has received from the International Stoker Co., 47 Montgomery street, Jersey City, N. J., a copy of the catalogue they are now issuing to trade, illustrating and describing their stoking device. The Crowe stoker consists of a set of grate bars carried from front to back of furnace over a number of peddler wheels by two endless chains, one on each side of the furnace. This stoker has won some reputation for itself, and the catalogue describing it is of especial interest. Readers of Hardware and Metal should not fail to secure a copy of this from the International Stoker Co.

Hart-Parr Engines.

Hart-Parr Co., Charles City, Iowa, are sending out a catalogue illustrating and describing the gasoline engines manufactured by them. It is the claim of the firm that in the design of their engines the objection to gasoline engines has been eliminated to a very great extent. This has been done, they state, by getting at the root of the trouble, and designing on correct principles. The descriptions are very complete, and should prove of interest to any considering the installation of gasoline engines. The catalogue may be had upon application to the Hart-Parr Co.

Sand Lime Brick.

H. Huennekes Co., engineers and contractors for sand-lime brick, factories 114-118 Liberty street, New York, are sending out a booklet containing testimonials and tests of sand-lime bricks. Among these are both foreign and American. This firm accepts contracts for the installation of factories, or for the manufacture of sand-lime bricks under Huennekes system, in any part of the country, and also undertakes to teach workmen. This booklet may be had upon application to the H. Huennekes Co. by readers of Hardware and Metal.

Do You Tumble?

The Globe Machine & Stamping Co., Cleveland, Ohio, are sending out a little booklet entitled "Do You Tumble?" describing and illustrating their improved oblique tilting and tumbling barrels. These tumbling barrels

Rugs and painted or varnished floors are the style now. The day of the dust and germ collecting carpet is past.

THE SHERWIN-WILLIAMS FLOOR FINISHES

FOR FINISHING OLD AND NEW FLOORS IN ANY STYLE DESIRED

are the best and most profitable for both dealer and user. No other floor finishes are so well advertised, give so much satisfaction and pay the dealer such good, permanent profit.

The line comprises:

THE S-W. INSIDE FLOOR PAINT—

For an effective inside finish.

THE S-W. PORCH FLOOR PAINT—

A lasting outside floor paint.

FLOORLAC (registered)—

A high gloss stain imitating natural wood.

MAR-NOT—A tough, elastic varnish.

THE S-W. FLOOR-WAX—For easy and "glassy" polishing.

THE S-W. CRACK AND SEAM FILLER—

For filling seams and cracks in floors.

If you want the best and the most of the floor finish trade in your territory, stock up with one or more of the S-W. Floor Finishes now. Send for booklet and prices today.



THE SHERWIN-WILLIAMS Co.

PAINT AND VARNISH MAKERS

CANADIAN DIVISION

HEADQUARTERS AND PLANT: 21 St. Antoine St., Montreal.

DEPOTS: 86 York St., Toronto, and 147 Bannatyne St. E., Winnipeg.

E1193

are designed to clean, smooth and brighten sheet metal stampings, small iron or brass castings, forgings, rods, pins, etc., In these tumblers the work can be seen while it is being tumbled, and samples of the parts in process of finishing may be taken out during operation without stopping the machine. Readers of Hardware and Metal can secure a copy of the catalogue upon application.

Sturtevant Blowers.

The B. F. Sturtevant Co., Boston, Mass., are sending out the second edition of catalogue No. 115. It is a condensed catalogue of the Sturtevant forges, steel pressure blowers, steel plate planing mill exhausters, counter-shafts, blast grates, galvanized iron work, disk and propeller fans, engines, dynamos, motors, generating sets, steam heating, ventilating and drying apparatus, mechanical draft fans, exhaust heads and steam traps. It is a

very handy desk catalogue for reference. Readers of Hardware and Metal may secure a copy upon application.

Metallic Packing.

The Hilernan-James Co., McKeesport, Pa., are sending out a small circular pointing out a few of the good points of plastic metallic packing. They claim that this is the only metallic packing on the market which may satisfactorily be used on steam hammers. They also claim it to be advantageous for piston rods, air compressors, locomotive air pumps, throttle valves, corliss valves and valve stems. Users of packing should secure one of these circulars.

Water Purifier.

Hardware and Metal has received from the Just Mfg. Co., Philadelphia, their latest catalogue describing and illustrating the method of operation of the Just mechanical boiler cleaner. By this

method the chemical impurities are separated from the water in the following way: The water at the boiling point, which is the point of liberation of impurities, is carried to first a receptacle where all solid substances are removed, and second to a filter where the water is freed from oil or grease, after which it is again taken back to the boiler in a pure state, and as it is converted into steam no deposits are made in the boiler. This catalogue can be had by readers of Hardware and Metal by referring to the Just Mfg. Co.

Wayne Gas Engine.

The Fort Wayne Foundry & Machine Co., Fort Wayne, Ind., are sending out a handsome catalogue describing and illustrating the line of gas engines manufactured by them. In the beginning is given a very clear detailed general description of the engine. Next come a few of its special advantages, and finally the different uses the engine may be put to are described. Much useful information regarding gasoline or gas engines is given, and should prove of value to all prospective buyers. It can be had upon application.

Sprague Electric Co.

Hardware and Metal has received from the Sprague Electric Co., New York, catalogue 308, the electric fan catalogue for 1904, and also bulletin No. 219 superseding No. 206, describing and illustrating their direct current round type motors. The fan catalogue should prove of great interest to all hardwaremen handling electrical supplies, since a large variety of fans are described and illustrated, and there also are given specifications and price lists. Readers of Hardware and Metal may secure a copy of the catalogue by applying to the Sprague Electric Co. In the bulletin a general constructive description of the single field coil round type of motors is given, together with the various uses to which they are specially adapted.

How to Handle Dennis Lines.

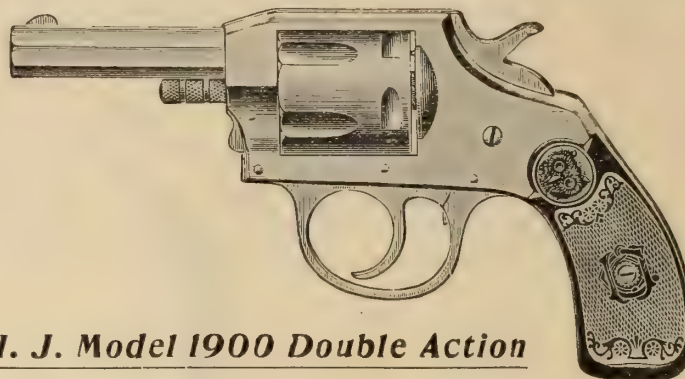
The Dennis Wire and Iron Co., London, Ont., are sending out to the hardware trade the general catalogue No. 8. They enclose a circular to the hardwareman how he might handle their goods with the greatest profit to himself. If any reader of Hardware and Metal has not received one of these catalogues, he should do so by applying to the Dennis Wire and Iron Co.

New Screw List.

Caverhill, Learmont & Co., Montreal, are issuing to the trade a very handy

THE RECOGNIZED

4th OF JULY REVOLVER



I. J. Model 1900 Double Action

The best Revolver for the money in the world. Order of your jobber, and insist upon getting it. Do not allow of substitution. Made by

Iver Johnson's Arms & Cycle Works

MAKERS OF THE FAMOUS

IVER JOHNSON REVOLVERS, GUNS and BICYCLES

NEW YORK OFFICE,
No. 99 Chambers Street.

ARMORIES & GENERAL OFFICES,
Fitchburg, Mass., U. S. A.

BLACK JACK

TRY A
3 DOZ. CASE

A BIG WINNER



ASK YOUR
JOBBER FOR IT

SELLS ON SIGHT

screw list, which will be a convenience to a hardware merchant. It is a large sheet, giving the list price of the various sizes of screws and leaving blank columns in which the merchant may enter the net cost, the selling price per gross, and the selling price per dozen. This sheet should be handy for reference. Write for it, mentioning Hardware and Metal.

NERNST LAMPS FOR STREETS.

It is claimed that under favorable conditions, with the use of Nernst lamps, it is possible to produce a much

better light than that given by incandescent gas mantles, and at a smaller annual cost per lamp than is charged in most places for gas lighting, and still leave a small net profit. This is not the only argument in favor of these lamps, as they are remarkable for their clear, steady light, as well as for their long life, requiring a minimum attendance. When these lamps were first manufactured the cost was very high, but it has since been reduced to a reasonable basis. They are being adopted for street lighting in many places with considerable success.

H. S. HOWLAND, SONS & CO.

WHOLESALE
ONLY.

Telephone,
Office Park, 1584.

TEMPORARY WAREHOUSE:

212-218 Cowan Avenue.

SAMPLE ROOM at 21 Scott Street (Telephone)

(where orders may be left if not convenient to visit our warehouse at Parkdale).

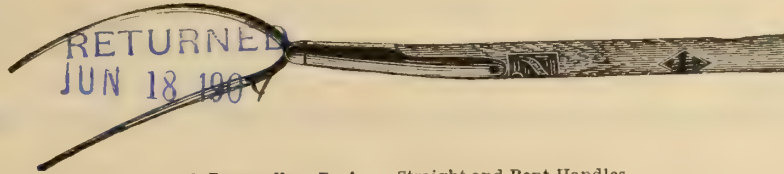
LIMITED
ONLY
WHOLESALE.

Telephone,
Warehouse, Park 1585

HARVEST TOOLS



Straw Forks



2-Prong Hay Forks. Straight and Bent Handles.



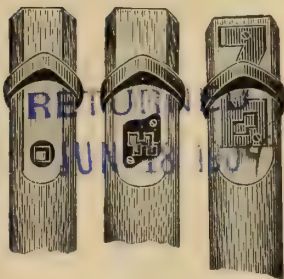
3-Prong Hay Forks. Straight and Bent Handles.



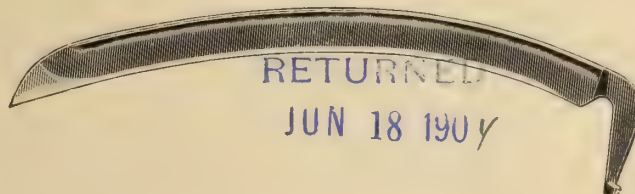
Wood Hay Rakes
Wood and Iron Bows



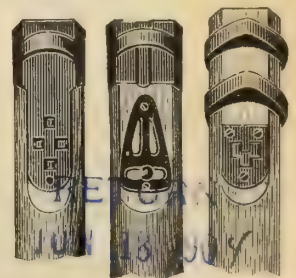
Barley Forks
With and without Guard



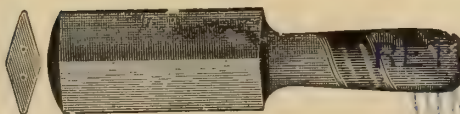
Snaths



Scythes. Narrow and Wide Heel.



Snaths



"EMERY" Scythe Stones



Scythe Stones

WE NOW HAVE A FULL STOCK OF HARVEST TOOLS ON HAND.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

Our prices are right.

GRAHAM NAILS ARE THE BEST.

Factory: Dufferin Street, Toronto, Ont.

We Ship Promptly.

New and Second-Hand Machinery,
Engines, Boilers, Belting, Pulleys,
Motors, Etc.

Any readers of this paper wanting
any of the above goods may have
an advertisement inserted free in
HARDWARE AND METAL, the
machinery weekly newspaper of
Canada, by enclosing this notice.
Address

HARDWARE and METAL
Montreal, Toronto, Winnipeg.

The Hamilton Steel & Iron Company

LIMITED

HAMILTON, - CANADA.

OPEN HEARTH

STEEL CASTINGS

OF ANY WEIGHT.

NOT IN THE COMBINE

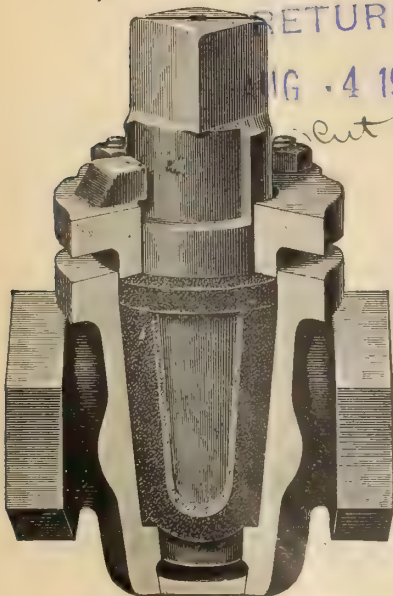
Ask for Prices of

Shovels, Spades, Scoops, Etc.

WE HAVE A LARGE STOCK.

CANADA HARDWARE CO., Limited, Montreal

A TIGHT STOP



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JUN 4 1904

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Page 15

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Asbestos Packed Cocks

for

Boiler Blow-off.

THE U-SHAPED GROOVES ARE PACKED WITH VULCANIZED
ASBESTOS, AND THE BARFFED (RUSTLESS) PLUG COMES
IN CONTACT WITH ELASTIC PACKING ONLY.

PUT ONE OF OURS WHERE SOME OTHER MAKE
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THE FAIRBANKS COMPANY

MONTREAL

TORONTO

WINNIPEG

VANCOUVER

MACHINERY

Quebec.

Office of **HARDWARE AND METAL**,
232 McGill Street.

Montreal, June 17, 1904.

INACTIVITY seems to be the key note to the situation that obtains in the machinery market this week, although some dealers report a fairly active business. Marked quietness prevails, which is all the more apparent, following as it does, several weeks of a brisk and active market. The consensus of opinion seems to be that there is merely a temporary lull, that is not at all vital, and that will not last for any length of time. Sales on the whole are small, and not many of them. One unusually large order for machine tools is reported from Vancouver, and a few fair sized orders for wood working machinery have also been placed. Dealers generally seem to be satisfied with the way inquiries are coming in, which are usually an index of the immediate prospects for future business.

In the electrical line, the ordinary supply business seems to be good. There are fewer installations, and fewer inquiries than a year ago. This is, however, the dull season for electrical machinery. It is not in the bright days of Summer that dynamos are usually installed, but later when the days become shorter, and the hours of darkness more numerous, that people think of putting in lighting machinery. A busy season could hardly be expected at this time, but nevertheless several good sized installations are now in active operation.

Ontario.

Office of **HARDWARE AND METAL**,
10 Front Street, East.

Toronto, June 18, 1904.

SOME dealers report a very active market this week in most lines, but this is not the general feeling on the market. One local firm has had some large orders placed this week in the line of iron-working machinery especially. Wood-working machinery has also created some interest on the market this week, while engines and boilers are holding their own. Otherwise, conditions are much the same as last week.

Machinery and Electrical Notes.

A new steel traffic bridge is to be built across the Souris River at Melita, Man.

The Town of Rat Portage, Ont., is contemplating building a new power plant.

Alfred Rubbra has just received a large consignment of machinery for exhibition purposes, including lathes, drills and other machine tools.

The employees of the Kerr & Coombes foundry, Hamilton, held their annual picnic at Victoria Park, Niagara Falls, recently. About 200 were present.

The Martin Electric Supply & Construction Co. have been awarded the contract of installing a plant of 150 lights in the Aylmer canning factory at Aylmer, Ont.

The Canadian Westinghouse Co., Hamilton, Ont., are having eleven Cincinnati milling machines and two Cincinnati universal grinders installed by H. W. Petrie, Toronto.

The Fairbanks Co., through their Montreal branch, received an order this week for a twenty-five ton Niles traveling crane, from the Robb Engineering Co., Amherst, N. S., who are enlarging their works.

The Electrical Development Co., Niagara Falls, Ont., are having some more large centrifugal pumps installed by H. W. Petrie, Toronto, for their construction work. They are now using several, including two 18 inch direct connected.

The Standard Construction Co., of Montreal, closed a contract this week with the reverend sisters of Hotel Dieu, for a complete isolated electric service plant. This includes station equipment, switch-board accessories, motors for elevators and laundry work, and complete wiring.

Roger Miller, general manager of the Locomotive and Machine Co., announces that A. J. Pitkin, who has just been elected president of the American Locomotive Works, has accepted the presidency of the Locomotive & Machine Co., of Montreal; to succeed S. R. Callaway.

The Canadian Electrical Association convention is being held this week at Hamilton, and promises to be one of the best that the association has ever had. A novel feature is a question box for the benefit of the members. Several interesting papers are being read.

The Owen Sound Iron Works Co., Ltd., are very busy just now, building cement mill machinery of different kinds. They are building four large steel coal hoppers, several slurry pumps and are lengthening one of the rotaries for the Sun Cement Co., Ltd. They are building for the Owen Sound Portland Cement Co., of Shallow Lake, a cooler, sixty feet in length, and forty-two inches in diameter.

Among the orders received by H. W. Petrie, Toronto, this week are: Two portable engines for Little Bros., Hailbury, Ont.; laundry plant for Orillia Steam Laundry; 25 h.p. hoisting engine for Thompson Bros.; iron planer for Thos. Pink, Pembroke, Ont.; machine shop outfit for the Barrie Carriage Co., Barrie, Ont.; an 80 h.p. boiler and 65 h.p. engine for Beaverton Brick & Tile Co., Beaverton, Ont.; cold steel, cut-off saw, gas tempering plant, and other tools for the Henderson Roller Bearing Co., Toronto.

The Montreal Street Railway Co. is laying new rails over a large part of this route. New 90 lb. rails have already been laid over a considerable distance on St. Catherine street. The company proposes to use a new rail, which is in reality the ordinary rail used on steam roads. There is no groove in it for the flange of the car wheel to run in. It is this groove that produces the grinding noise made by street cars. The stone blocks facing the rails are to be grooved, and the safety effect will be just as good as that obtained by the groove steel rails now in use. The space between rails, and between the tracks and for eighteen inches outside the tracks is to be paved with nepheline cyanide, a hard rock obtained in the city quarries behind the mountain.

DRAFT FOR STEAM POWER PLANTS.

THE importance of good draft, natural or artificial, for supplying sufficient oxygen for the economical combustion of fuel, has long been recognized by engineers. The gain, both in efficiency and capacity, obtained by the rapid and energetic combustion, and the resulting high furnace temperatures is well established. The latent energy of the coal pipe is well understood, and all manufacturers are, or should be, close observers of the processes which convert this latent force into heat or thermal energy. Highest furnace efficiency would be obtained when all the heat of combustion was transferred to the water in the boiler. Of course this is impossible because of the diffusion of the heat that takes place in three ways, viz., by radiation, convection and conduction. In practice there is fully 20 per cent. of the heat units lost in these ways, and that calculation is based on tests made with the most improved water tube boilers. So that the efficiency of the best boilers is not over 80 per cent.

Combustion is a chemical action consisting of the oxidization of the substances contained in the fuel, and during this chemical action heat and light are

some of the heat units produced in the combustion. In practice, however, more than the theoretical amount of air is required for combustion. The reason for this is that under the most perfect draft regulation some air will pass through the fuel before chemical action takes place. In the ordinary natural draft more than twice the theoretical amount of air is required; this amount has been found to be from 24 to 36 pounds of air per pound of carbon. In the artificial draft the current of air is not very strong, and consequently is unable to penetrate a very thick bed of coal, and because the layers are thin a large amount of the air passes through without affecting the coal. This air mixes with the products of combustion and thus reduces the temperature. With artificial draft from $1\frac{1}{4}$ to $1\frac{1}{2}$ times the theoretical amount of air is required, because the current being stronger, heavier beds of coal can be used, and thus there is less chance of air getting through the bed without giving up its oxygen to the carbon and hydrogen in the coal. Therefore with artificial draft the heating efficiency of the furnace is much higher than with natural draft. With artificial draft, one pound of carbon requires on

tificial means. The natural means is by creating a draft, making use of the natural property of heated air, namely, that of rising. The way in which this property of gases is utilized in the production of a draft is to build a smoke stack and heat the air in this stack. The heated air rises, and in rising creates a vacuum, to fill which vacuum cold air rushes in through the dampers of the furnace. Thus a draft is created. Theoretically there is a certain amount of air necessary to complete the combustion of, and thus obtain the greatest efficiency from, a certain amount of coal. As was before stated, the amount of air necessary for complete combustion with natural draft is twice the theoretical amount necessary. The reasons for this have already been given. If the air supplied is in excess of the theoretical amount required for the complete combustion, the extra amount of air takes up a considerable number of heat units generated in the combustion.

If the draft is not a good enough one the necessary amount of air will not be supplied, and the combustion of the fuel will be incomplete. This incompleteness of combustion asserts itself in two ways. If the supply of oxygen is limited carbon monoxide (c o) instead of carbon dioxide (c o₂) will be formed, and the number of heat units generated

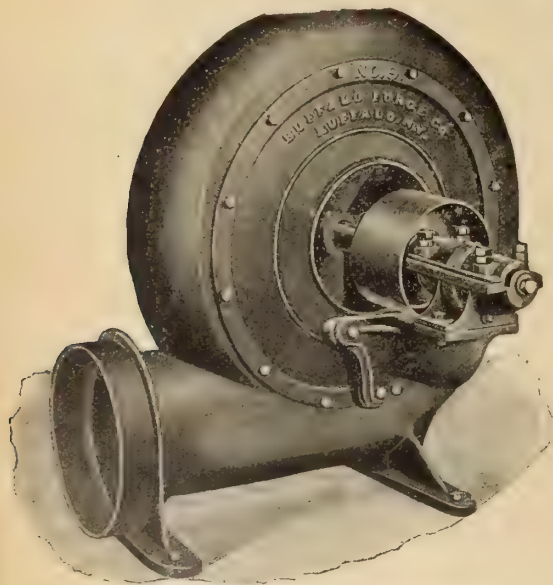


Fig. 1.—Buffalo "B" Blower; horizontal discharge.

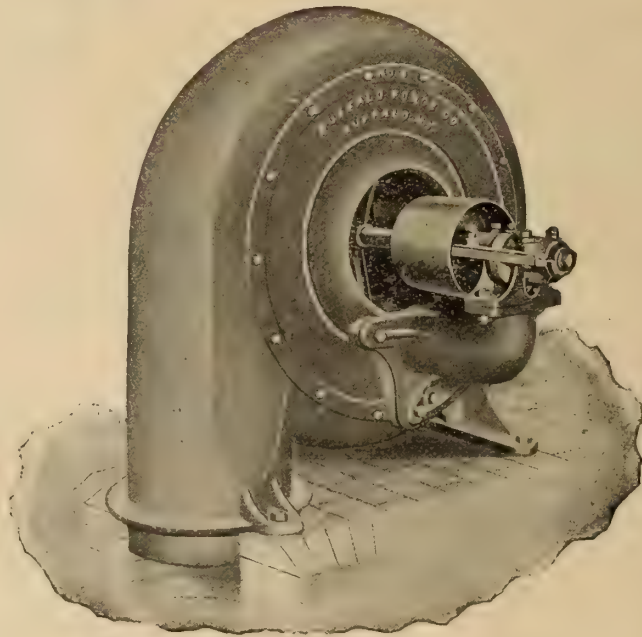


Fig. 4.—Buffalo "B" Blower on boiler setting.

given off. The various grades of coal contain different quantities of carbon, hydrogen and sulphur, the better grades containing more carbon and hydrogen than the other grades. To secure complete combustion, and thus secure the greatest number of heat units, a certain amount of oxygen is necessary in the oxidization of these three substances. The air consists of a mechanical mixture of oxygen and hydrogen and, therefore, there is a certain amount of air required to complete the combustion of the fuel. It is very important that sufficient air be supplied to complete combustion, or else the greatest heat efficiency will not be secured, but it is of equal importance that too much air is not supplied, or else some of the oxygen will pass through unchanged, and will take up

an average 17 pounds of air, and the total weight of the products of combustion is 18 pounds. With chimney or natural draft a good average amount of air required would be 29 pounds, and the total weight of the products of combustion is 30 pounds. In each case the total number of heat units produced is the same, but in the case of the natural draft there are 30 pounds of gases to absorb this heat, while in the artificial draft system there are only 18 pounds to absorb this heat. Thus nearly twice the temperature would be obtained from the same amount of coal in the artificial draft system as in the natural.

NATURAL OR CHIMNEY DRAFT.

Oxygen may be supplied to the fuel in two ways, by natural means or by ar-

by this chemical action are less than one-third of those generated in the formation of carbon dioxide. If the supply of air is insufficient to allow complete combustion of the carbon in the coal, little minute particles will fly off the mass and be carried up the chimney by the draft in the form of smoke. Thus volumes of smoke issuing from a chimney means that fuel is being wasted, besides proving a great nuisance in itself in many cases. In order that the natural draft may be maintained it is necessary that a continuous stream of hot gases be going up the chimney, and that represents a constant loss in heat units.

There is another item to be considered in the establishment of a natural draft, namely, the chimney. The size and

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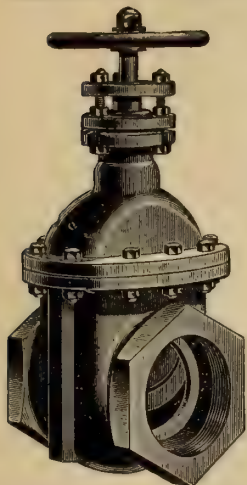
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STAR
SPECIAL
HERCULES
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QUALITY & PRICE TO SUIT
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No wood to rot or check.

SPECIAL DISCOUNTS TO THE TRADE.

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Head Office and Works, TORONTO, ONT.

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**If Corundum be no Better Than Emery,
Then Emery is no Better
Than Iron Ore.**

If the United States Government be right when it states that emery is a mechanical admixture of iron ore and corundum (Bulletin No. 180, Department of Interior), then you must agree that the above deduction is logical.

To use iron ore for polishing or grinding iron or steel would be absurd; then why use iron ore and corundum (emery) when you can obtain the pure abrasive—

CRAIG MINE CRYSTAL CORUNDUM.

The Canada Corundum Company, Limited
TORONTO, CANADA.

height of the chimney necessary depends upon the velocity and volume of the draft required. The greater the volume of the draft required, the larger must be the cross-section of the chimney, and the larger the cross-section the taller must be the chimney in order to produce the same velocity of draft. A tall chimney requires a very firm foundation, which will occupy considerable space, which space might be utilized to good account in the plant itself for manufacturing purposes. Once the chimney is constructed it cannot be altered, and therefore in building a power house provision has to be made for an increase in boiler power by constructing a chimney that will produce the draft necessary for the possible increase. Then there is a serious drawback to that plan since if the chimney produces a greater draft than is necessary many heat units are used up in heating the surplus amount of air.

MECHANICAL DRAFT.

There are in general three forms of mechanical draft, that is, a draft produced by mechanical means, for the

the air is delivered should not be too great, since if it is going through the pile of coal at a great velocity holes will be blown through, and a free passage for the air be made. The air would then pass through without combining with the coal, and would carry with it fine particles of carbon in the form of smoke. The velocity should be just sufficient to force the air through the bed, so that in passing through there will be time for complete utilization of all the oxygen in the air.

The place the forced draft is applied in the majority of cases is through the bridge wall at the rear end of the grates. However, with a proper arrangement of dampers, it can just as well be applied through the side walls or through the front.

Forced draft is especially applicable to the burning of low grades of fuel, such as culm screenings, etc. The best results are obtained in these cases by applying the draft directly to the boiler grates. Throughout the anthracite coal regions, where there is a large accumulation of culm and screenings, very practical use has been made of the

through the boiler fires at different grate intervals. However, this may be avoided by proper installation. The type of blower most used in small plants, and especially where a poor grade of fuel is used, is illustrated in figure I. This special illustration is the Buffalo "B" volume blower, manufactured by the Buffalo Forge Co., Buffalo. These blowers have cast-iron shells, and are designed for the heaviest service, delivering air at a pressure up to six ounces per square inch. They are installed in small plants or where the fuel requires high air pressure to ensure complete combustion. For forced draft outfits of large size, and where coal is consumed, a type of blower illustrated in figure II is generally used. These are steel plate fans. The one here illustrated is manufactured by Sheldon & Sheldon, Galt, Ont.

In central heating and lighting stations in large cities it is required that a maximum steaming capacity be obtained in a minimum space. In such places the mechanical force draft is especially applicable with good results, since the blower may be situated where

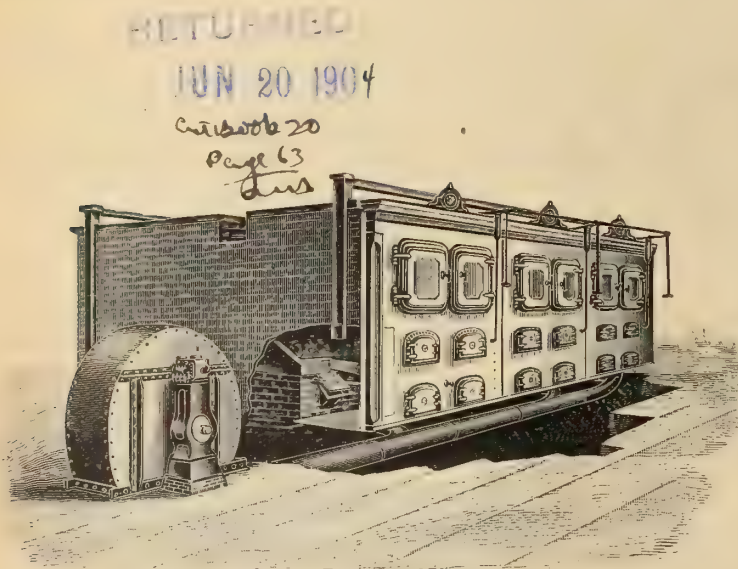


Fig. 2.—Forced Draft applied to three boilers

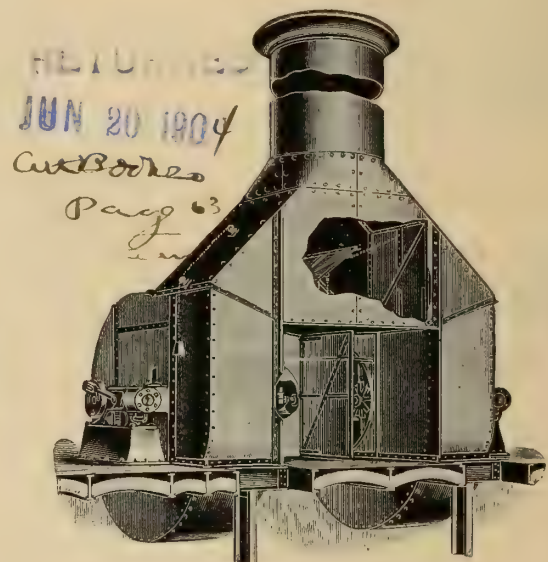


Fig. 3.—Duplex Fans for induced draft.

most part by use of fan. First there is the induced draft; second, the forced draft, and third, a combination of the forced and induced draft.

FORCED DRAFT.

A forced draft is obtained by installing a fan to force air beneath the boiler grates, up through the fuel and out of a short stack to the atmosphere. Forced draft has been used for a good many years, the first installations being principally for burning refuse materials or to assist natural draft of low efficiency. The advancement of the system has been gradual but steady.

In the first systems of forced draft it was thought necessary that a large volume of air should be supplied, and at a high rate of speed. However, the inadvisability of this was gradually recognized as users got more experienced with the system, until now it is recognized that the amount of air delivered by the fan should not be in excess of that containing enough oxygen for the complete combustion of the fuel. It is also recognized that the rate at which

forced draft. In the Pennsylvania region the Buffalo Forge Co., Buffalo, installed the first forced draft fans used for this purpose of burning poor fuel.

Forced draft can very often be utilized to very good effect in assisting the natural draft under certain conditions. For instance in a power plant where natural draft is used it might happen that the chimney created an adequate draft for the boilers under ordinary atmospheric conditions, but under adverse conditions did not. To supply that defect a small fan might be installed, and run only on the occasions when found necessary. That might supply all needs, and would be considerably cheaper than changing the system entirely from natural draft to mechanical draft, or, keeping the natural draft system, to increase the size of the chimney.

The chief disadvantage of the forced draft system is that occasionally if the system has not been well applied, or if some of the installation details are not correct, there is apt to be an outward leakage of gases, and also blow holes

most convenient, even to suspending them from the ceiling.

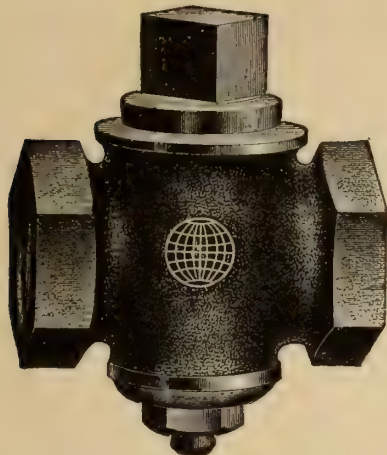
The forced draft system is growing in favor for marine boiler service. In marine service a very widely used way of applying the draft is to blow the air into an inclosed boiler room. Another method used is to introduce the air beneath the grates with a special arrangement of air-tight ash-pit doors and dampers, so arranged that the draft is closed off when the doors are opened for firing.

Where forced draft systems may be installed to the greatest advantage is in connection with mechanical stokers of the underfeed type, and indeed the efficiency of the stoker depends directly upon the adequacy of the draft supplied. The forced draft system is also absolutely necessary in order to secure the greatest efficiency and economy of hollow-blast grates.

INDUCED DRAFT.

In the exhaust draft system an exhaust fan draws the gases through the

"GLOBE" STEAM and GAS COCKS. "GUARANTEED SATISFACTORY."



Catalogue "C" and Discount Sheet on application.

The Globe Brass Works
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Threshermen, Attention!

The Threshing belt that gives the greatest satisfaction is the "MAPLE LEAF"

Stitched Cotton Duck Belt

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Ask your dealer for it and take no other.

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Superior in Design, Workmanship
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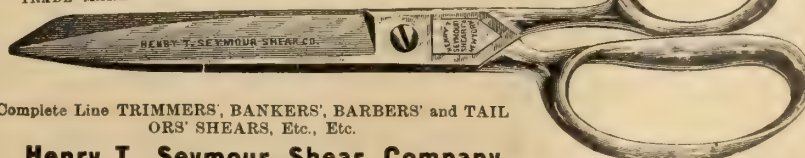
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Latest Catalogue will be sent in exchange for your business card.

flues and smoke connections and discharges into the stack. What was said regarding forced draft in the beginning may also be applied to induced draft.

The idea of mechanical induced draft is not new, but it is not until lately that it has been put to very practical use. It has been used previous to the last few years almost entirely for the purpose of improving poor natural draft.

It is a fact that one pound of air occupies a volume of 13.4 cubic feet, nearly, at a temperature of 70 degrees Fahr. Every pound of coal burned requires practically from 18 to 20 pounds of air. Hence a fan to supply air for forced draft system must handle 13.4x18 or 041.2 cubic feet of air at 70 degrees Fahr. for every pound of coal burned in the furnace. Neglecting the other constituents of coal, one volume of carbon unites with two volumes of oxygen to form two volumes of carbon dioxide, thus: $2O_2 + C_2 = 2CO_2$. Thus the two volumes of oxygen taken from the air are made up by two volumes of carbon dioxide, so that the volume of the gases after combustion has been completed, under the same conditions of temperature and pressure, are practically the same as before. However, the volume of the gases after combustion is much greater than before, because they are at a much higher temperature. The volume of gases varies directly, as the absolute temperature, which is 273 degrees below zero, C. Assuming that the temperature of the gases after combustion is 550 degrees Fahr., it might be roughly estimated that the volume would be twice that of air at 70 degrees Fahr., from the following calculation: 70 degrees Fahr. equals roughly 40 degrees C; 550 degrees Fahr equals roughly 305 degrees C; 273 plus 40 equals 313 and 273 plus 305 equals 578; 578 is roughly twice 313, and therefore the volume of the gases after combustion may be roughly estimated at twice the volume of the gases before. Since a fan handles volumes and not weights, it may be readily understood that a fan for an induced draft must have twice the capacity that a forced draft fan has in order to supply the same volume of air. Such is the case if an economizer is not used in connection with the induced draft installation. However, the largest and most successful applications of mechanical induced draft have been made in connection with feed-water heaters, designed to utilize the waste heat of flue gases, and known as fuel economizers. Of course when the economizer is used, the gases are cooled down before they are handled by the fan, and therefore a fan of greater capacity than the forced draft fan is not necessary. Induced draft is admirably adapted for the combustion of all kinds and grades of fuel. It can be used with down-draft furnaces, with all types of automatic or mechanical stokers, except the underfeed type, and with all kinds of common and rocking grates. Figure III represents a duplex steam fan, as constructed by Sheldon & Sheldon, Galt, Ont., for the induced draft system.

COMPARISON OF INDUCED AND FORCED DRAFT.

Whether it is best to instal induced or forced mechanical draft depends to a great extent on circumstances and con-

CONDENSED MACHINERY ADVERTISEMENTS.

MACHINERY WANTED.

Notices under this heading inserted free for subscribers to **HARDWARE AND METAL**.

DRY KILN APPARATUS—for small heading mill; must be cheap and in good repair. Box 18, **HARDWARE AND METAL**, Toronto.

MINING tools wanted, steam pump or ejector, forge, hammers, sledge, 1-in. steel, etc. Box 15, **HARDWARE AND METAL**, Toronto.

WANTED—Paper-cutting knife and scoring machine. Address, giving prices, to Box 22, **HARDWARE AND METAL**, Toronto.

WANTED—Good second-hand double spindle drilling machine, with a maximum distance between centres of at least 50 inches. Apply **HARDWARE AND METAL**, Toronto.

WANTED—Second-hand water motor—not less than $1\frac{1}{2}$ horsepower or more than 2 horsepower; water pressure 45 lbs. Apply to Box 184, Cornwall, Ont.

WANTED—36 x 36 in. x 10 ft. planer; 16 ft. lathe, 24 in. swing; and No. 500 belt drivers' drop hammer. Address Box M 145, **HARDWARE AND METAL**, Toronto.

MACHINERY FOR SALE.

Special rates will be quoted for notices under this heading for periods of three months or longer.

A GASOLINE ENGINE—That has stood the test and proven to be the most economical ever operated in America. Made by Tuerk Iron Works, Berlin, Ont.

ENGINE LATHE—Swings 17 in. over shears, takes 4 ft. between centres; good order; cheap for cash. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

FOR SALE—Brown automatic engine—cylinder size, 17 by 36; been used very short time. Toronto Carpet Manufacturing Company, Limited.

GASOLINE ENGINE—Six horse power; second-hand; good as new; cheap. Box 444, Berlin, Ont.

PLANER AND MATCHER—Cowan; 6 x 24; nearly new; cheap. F. A. Young, Blenheim.

PUG Mills—All iron and steel; kiln doors in four sizes; bands, grates and a full line of brick-yard supplies. Address H. C. Baird & Son, Parkhill, Ont.

ROCK DRILLS—For water works, excavating, quarries and mines; steam hoists for builders, mines and quarries; simple, compound and triple marine engines for pleasure launches. The Dominion Rock Drill Co., Napanee.

STEAM and gasoline engine, boilers, grist, feed mill and elevator machinery. Wm. B. Lewis, 1-A Garry court, Winnipeg.

GAS and gasoline engines, stationary, marine, automobile; also launches; silver medal, highest award Dominion Exhibition, Toronto; also Toronto Exhibition, 1902; write for catalogue. The Gasoline Engine Co. of Toronto Junction, Limited.

HOISTING ENGINES. derricks, continuous concrete mixers, 250 yards capacity; dump cars, railway construction cars, track-laying tools, boilers, etc. Marsh & Henthorn, Belleville, Ont.

IRON PLANER—24 in. x 24 in. x 6 ft., second-hand in first-class condition, for sale; a quick turn over. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

NEW STATIONARY ENGINES—20 x 24 Waterous sawmill engine; 14 x 18 Waterous sawmill engine; 9 x 10 McEwen engine; 13 x 14 McEwen engine. Waterous, Brantford.

ROCK DRILLS for waterworks excavating, quarries and mines; steam hoists for builders, mines and quarries; simple, compound and triple marine engines, for pleasure launches. The Dominion Rock Drill Co., Napanee, Ont.

THE FAIRBANKS CO.—Temporary warehouse, 124 Bay—standard scales, valves, trucks, letter presses, shafting, hangers, pulleys, belting, mill supplies, machine tools; "Fairbanks" gas and gasoline engines; write for price list.

THE STUART MACHINERY CO., Winnipeg—One 50-light dynamo, direct connection with gasoline engine; 20 electric motors and dynamos, from $\frac{1}{4}$ horse power to 1,000 lights; sole agents for McGregor-Gourlay's iron-working and wood-working machinery.

A RARE OPPORTUNITY.

The undersigned is prepared to receive sealed tenders up to the 30th day of June, 1904, for the buildings, machinery, stock, etc., of the Alexandria Wood Export Company, Limited. The buildings are practically new and the machinery of the most modern type. The property can be easily changed from its original purpose to a furniture or waggon factory. It is situated in one of the most central and thriving towns in Ontario. As an evidence of the business done in the town, one of its factories has an output of about five thousand carriages annually.

The highest or any tender not necessarily accepted.

ANGUS McDONALD, Assignee.

Alexandria, May 14, 1904.

(26)

SITUATIONS VACANT.

COMPETENT ENGINEER—To take management and operate local company near Toronto, who can invest \$2,500.00, which will be secured by first mortgage on plant at 6 per cent. Address Box 462, Mail and Empire Office.

ELECTRICIAN WANTED—Hespeler municipal electric light plant; must be able to do line work; all night system; steady man wanted; state experience and salary wanted. J. W. Christman, chairman electric light plant, Hespeler.

ditions. As before stated, the forced draft system is adapted for burning hard coal screenings and for installation in connection with underfeed stokers and hollow blast grates. Induced draft is suited for the burning of all kinds and grades of fuel, and can be used in connection with down-draft furnaces, all types of automatic or mechanical stokers, except the underfeed type, and all kinds of rocking grates. It cannot be applied, of course, to hollow blast grates. With the forced draft type of installation the great tendency of the fires is to burn in spots or patches, which necessitates a close watch being kept over them all the time; but with the induced draft system the fires will burn evenly and brightly all over the grates, and requires no great attention. It is much easier to ventilate the boiler room with induced draft since the forced draft is very apt to blow gases out the furnace door when opened, whereas with the induced system the draft is all inward and no gases can escape from the furnace, thus keeping the air fresh and the temperature of the room down.

With the induced draft system it is never necessary to shut off the draft in order to clean out the ash pit. Then the induced draft system is much more adaptable in connection with economizers, and in nearly all installations of economizers the induced draft system is chosen.

ADVANTAGES OF MECHANICAL DRAFT.

There are many advantages that might be pointed out for mechanical over natural draft, in connection with economy, efficiency and cleanliness. The first cost of installation is much less for mechanical than for natural draft. The enormous chimney that is necessary for an efficient natural draft is the thing that brings the cost up. Then once it is built it is a great problem to change it in order to increase the volume or velocity of the draft. On the other hand, should it be desired to increase the velocity or volume of the draft in a mechanical installation, the speed of the fan can be increased, or if necessary a fan of larger capacity may be installed, and the old one be sold. The natural draft cannot be regulated, and depends on atmospheric conditions; it is weakest at the time when it should be greatest, namely, at the time when the fire in the furnace is lowest. The mechanical draft can be regulated almost absolutely. The only item in which the natural draft is more economical than the mechanical draft is in cost of maintenance.

Because the mechanical draft can be regulated so well, the necessary amount of air can be admitted to the furnace and no more. Thus there is no fear that unused air is passing through the furnace, and thus consuming some of the heat units. This is very apt to occur in the natural draft system for reasons before pointed out. In connection with automatic or mechanical feeders it is very necessary to have an efficient and steady draft, and for that reason in connection with these feeders it is almost necessary to have mechanical draft. Then the use of the economizer in connection with the induced draft system is a great consideration. In the

natural draft system it is necessary that a stream of hot gases be streaming up the chimney in order that the draft may be maintained. With the induced system of mechanical draft these heat units that are being scattered to the outside atmosphere are utilized to heat the feed water for the boiler, and thus a large item in coal consumption is saved. In this way from 16 to 18 per cent. saving has been made in fuel consumption.

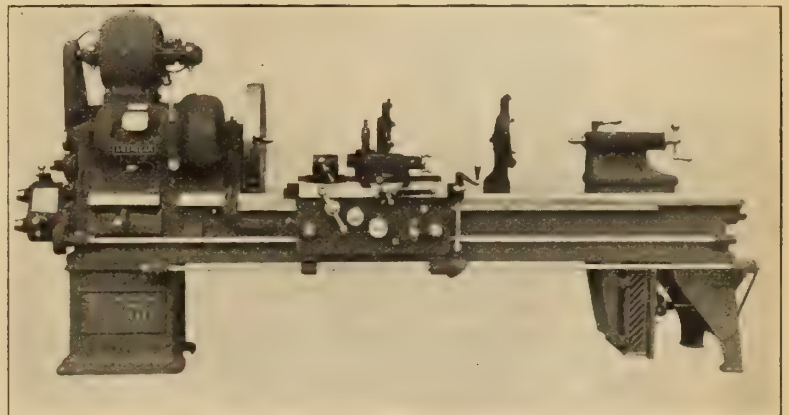
New Motor-Driven Lathe.

THE lathe here illustrated is a 20-inch motor-driven machine, manufactured by the American Tool Works Co., Cincinnati, O. There is now a large and ever increasing demand for machine tools driven by individual motors, with the result that a great variety of motors, with widely different systems of control, have been put upon the market, some of which have been a success and some not. The American Tool Works Co. early started to work upon this question, and aiming to arrive at a fixed and standard means of converting the speed of the direct con-

nected motor of any type to the customary spindle speeds of the lathe, they have perfected a method of instantaneous mechanical speed variations, as shown in the accompanying illustration, which is very simple, convenient and efficient.

nected motor of any type to the customary spindle speeds of the lathe, they have perfected a method of instantaneous mechanical speed variations, as shown in the accompanying illustration, which is very simple, convenient and efficient.

The machine is also suitable for belt drive from countershaft, through pulley mounted on driving shaft, as in the illustration. The great flexibility of this construction is a very important factor, as a machine installed as a belt-driven lathe may be readily converted into a motor-driven lathe at any future time—the motor being connected to driving shaft by gear or silent chain—and also may be set at any angle to overhead works, or driven from the floor below. This method of mechanical speed variation employs few parts, and fewer gears. All gears are completely housed in. They are arranged to run at very low pitch-line velocities, reducing to a minimum the noise incidental to all gear drives. It necessitates no slip gears, no pull pins, no hollow shafts with their attendant weakness, no tumbler gears, no complicated, delicate or frail parts—none of these usual faults of such devices, but is throughout extremely simple, practical, powerful, enduring and efficient.



20-inch Motor-Driven Lathe.

nected motor of any type to the customary spindle speeds of the lathe, they have perfected a method of instantaneous mechanical speed variations, as shown in the accompanying illustration, which is very simple, convenient and efficient.

The headstock is a complete unit, to which any type of motor, constant or variable speed, single or multiple voltage, may be readily connected by setting the motor either on top or at the rear of the gear casing. The construction is very simple and powerful. Only six gears are required for the mechanical speed changes, the gears being oppositely disposed on the spindle and driving shaft. The speed changes are obtained instantly while the lathe is in full operation, by an improved form of clutch and lever mechanism. The whole is encased in a neat and symmetrical box with provision for easy access to working parts, and ample means for lubrication. The necessary adjustment for any desired speed can be readily deter-

In addition to an all-gear speed changing device, this lathe is equipped with a rapid change gear mechanism, providing a wide range of changes for feeding and screw cutting, each change instantly and easily available, while the machine is in full operation, without removal of a single gear. Simple but complete index plates show clearly how to obtain any desired feed. Steel gears are used wherever necessary, cone of gears being all steel.

Bed is of drop-V pattern, which throws an exceptional amount of metal into the bridge of the carriage. The lead screw is placed on the inside of the bed, bringing the pull directly under the cutting tool, thus centralizing the strain, and obviating all that tendency to twist common in lathes where the pull is through the apron. Half nuts are operated by a lever at front of carriage. The lathe is strong and substantial throughout, with capacity for continuous hard service at high speeds and heavy feeds.

Canadian Trade With New Zealand.

MR. J. S. LARKE, Canadian Commercial Agent for New South Wales, Queensland and New Zealand, returned to Sydney, N. S. W., on April 23, and on the 25th of that month reported on the conditions of trade between Canada and New Zealand, as follows:

I returned from a trip to New Zealand on Wednesday last. I addressed the chamber of commerce at Auckland, Christchurch and Wellington. Much interest was manifested in the Canadian preferential policy. The audiences were necessarily limited, but in each case I had more inquiries regarding the possibilities of doing a trade with Canada the day after the meeting than in a week before. I found a marked change in the general attitude towards Canadian trade since my previous visit five years ago.

Then it was difficult to get most merchants to give time to discuss the possibility of trade with Canada. They thought, except in one or two lines, it was impossible to do anything. This time it was rather more difficult to get out of a merchant's office than to get into it. Several firms had opened up correspondence with Canadian houses from information given by me five years ago or obtained since from various sources. As a result of the New Zealand preferential and reciprocal policy, it is expected that Canadian trade will be greatly extended and much disappointment will be felt if it is not.

The hindrances to the development of this trade are numerous; the chief are inability of Canadian manufacturers to supply goods for export, and the absence of direct and cheap transportation. I should have liked to have gone to New Zealand immediately on the passage of the Preferential Act, but delayed the journey for four months in anticipation that I would receive replies to my inquiries from manufacturers in Canada wishing to take advantage of the New Zealand opening. I received only three in four months and only one line of the goods made is affected by the tariff.

TRANSPORTATION.

There is no direct connection between Canada and New Zealand. The three principal routes by which Canadian goods reach New Zealand are the overland via Vancouver and Sydney, and via Liverpool or via New York. Very great interest was taken in the question of freight and mail facilities at the meetings in the chambers of commerce and

elsewhere, and it was felt that there must be an improvement in the means now available. The quickest and most direct route between New Zealand, America and Europe, is via San Francisco. The Union Steamship Co., of New Zealand, was engaged in this service, but since the annexation of the Hawaiian Islands to the United States, it has been driven off this route by the coasting laws of the United States, and this has diminished the popularity of the route in New Zealand. The Union Co. is now a partner in the Vancouver service, and negotiations are now going on between the Government of New Zealand and the Canadian Australian Steamship Co. looking to an arrangement whereby the steamers of the company would call at a New Zealand port. This would render it necessary to abandon Brisbane, but it is represented that the Government of Queensland will make no objection to the change. If the arrangement is made it will much help trade between Canada and New Zealand, but it will not solve the whole problem.

The Canadian Pacific Ry. and Canadian-Australian steamers are now offering very low rates of freight, in some cases, perhaps, below cost, to encourage business, but even if it could carry average goods at twenty-five dollars per ton it would be impossible to compete with a rate of less than six dollars per ton on the ocean route between New York and New Zealand. In sailing vessels still lower rates are offered. Certain sorts of news paper are sold at thirty dollars per ton. A difference of even a dollar per ton freight in such case will determine business or no business. It is impossible for such classes of goods to be shipped by the overland route.

The New York and Liverpool routes are open to Canadian goods and the great bulk of the exports do come by these ways. But against the former are urged charges of delay, high charges in New York, and against the latter the damage done to goods by the transfer from one ship to another. Inquiries were, therefore, constantly made as to whether there was not a possibility of a quicker and cheaper route from eastern Canada direct.

CANADIANS SHOULD SUPPLY ADDRESSES.

As I stated I had proposed to call on every agent representing a Canadian product and every house which I knew who had received Canadian goods, in order to learn how the trade was pro-

gressing, whether the business was satisfactory, and if not, why it was not. I was prevented not only by lack of time, but also through lack of information. I have frequently in my reports and in letters to the firms, asked that whenever any arrangement was made for Australasian representation, to advise me of it in order that I could assist the agent where possible and also to ascertain whether he was likely to secure a business. Unfortunately, this is but rarely done, particularly in the trade of New Zealand. It was difficult to ascertain what Canadian firms had agencies, and when I did it was sometimes too late to see the agents. I found there were more than I anticipated, and handling a greater variety of goods than the trade returns of the colony indicated.

MANUFACTURERS' AGENTS NECESSARY.

The wholesale trade of New Zealand is mainly in the four cities of Auckland and Wellington, in the North Island, and Christchurch and Dunedin in the middle, or as it is generally termed, the South Island. But there are also a number of large towns where some wholesale business is done. In one or two instances firms resident in these towns were doing a trade over the whole colony. In some cases where the firm has branches in London or New York, they desire to do business directly with the Canadian manufacturer through these branches, but the large majority of the firms I called upon preferred to do it through a manufacturers' agent or traveler representing the firm.

The reasons given are that they could thus see a fuller line of samples, know more about the goods, better judge if they were suited to their trade and were saved much of the trouble of correspondence. If the goods were not satisfactory they could call in the agent, let him see their state and render it more probable that they would secure a fair settlement. Then if the house could not fill the order the agent would do his utmost to secure the goods elsewhere. For these reasons these firms were willing to pay the agent's commission in the added price of the goods.

AGENTS MUST BE WELL EQUIPPED.

The agent must be satisfactory, and to be satisfactory he must not only be intelligent, of good address, but he must undoubtedly be the representative of the firm he claims to be, have its confidence, thoroughly know the goods he handles and be within easy reach. Our trade is suffering from failures in each

of these points. The one most preferred is a representative directly from the Canadian exporting firm, but on a first trip he will meet the obstacles that neither he nor his firm is known, and it takes time to secure confidence in both. Then if he is likely to return to Canada, and not to speedily come back to Australasia, he will not be accessible.

It may seem absurd to imagine any difficulty as to whether an agent represents a firm, but I have one instance in which three people claimed to represent the same Canadian firm, and in another instance no less than four, and documents were produced to prove the claims. In one instance the documents were signed within a few days of each other. How this is explained in Canada I do not know, but the effect in New Zealand is firstly to damage these firms' chances of securing any business, and secondly, as the facts have become generally known, to injure the character of Canadian business methods.

A BAD SYSTEM.

Some of this doubling and trebling of agencies has undoubtedly been brought about in this way: A New Zealand firm has been slowly introducing a Canadian line. A sharp agent sees that it is likely to be a success, and having, perhaps, friends in Canada, makes representations to the Canadian manufacturer that his present agent can never make a market for him, as he has not energy and is charging too high a price, but that he will charge less and secure a market all over the colony. He will quote the price charged in New Zealand as evidence. The Canadian manufacturer not being aware of the high cost of introducing the goods, accepts the statement, and promptly sends out a consignment lot to the new and plausible applicant. The probability is that the new agent will cut prices so that there is no profit in handling the goods, and the business will be lost to the Canadian manufacturer.

AGENTS MUST KNOW THEIR GOODS.

New Zealand is a remarkable market for its population, but that population is less than a million. The market, too, is much sub-divided, and traveling is fairly expensive. It is necessary, therefore, for an agent to do a profitable trade that he shall handle a larger line of goods than would be necessary in more populous centres. The liability is that he will overdo it and consequently undertake to represent lines of which he understands little or nothing.

A good manufacturer's agent will refuse, as many in New Zealand are doing, to touch goods respecting which they have not expert knowledge, but others solicit everything they hear of in

the hope that some may turn out lucky. The result is that while they are doing good service to Canada in handling some lines, they are injuring it by offering lines whose merits they cannot explain, or else by making claims for the articles which cannot be realized. The reputation of the articles are thus so damaged that it will be difficult for even competent men to introduce them.

AGENTS MUST HAVE THE CONFIDENCE OF THEIR FIRMS.

In the past Canadian trade has suffered more from over than under confidence in Australian manufacturers' agents. In spite of direct advice to the contrary, goods have been shipped to untrustworthy men, and valuable samples sent to persons without inquiring as to their capability of handling the goods, which will involve loss.

Where losses have occurred through the mismanagement of the exporter, he is liable for them and should make them good, even though it might be impracticable to collect them by court of law. An agent should therefore bear such a character that any statements he makes on this head should be heeded, and a New Zealand house which pays cash for its goods long before it can see them will naturally hesitate to give large orders until it has both confidence in the exporter and an assurance that the agent has the confidence of his principal.

AGENTS SHOULD BE ACCESSIBLE.

Many agencies of Canadian goods are held by residents of Sydney or Melbourne for all Australasia. Where such agents have branches in New Zealand or travelers who regularly visit the colony this is satisfactory, but where this is not the case the business secured in New Zealand is likely to be small and irregular. The existence of four so considerable centres of distribution in so small a population presents difficulties in this respect. It would be better to have an agent in each of the cities were it not that they would be pretty certain to cut into each other's territory and create endless trouble. This is the more likely to occur because most of the large wholesale houses have branches in the different cities.

PERSONAL MENTION.

Mr. J. W. Taylor, representative in Montreal of the Pittsburg Steel Company, has moved to handsome new offices at 338 St. James street.

Mr. Robert Webster, of the Marshall, Wells Co., Duluth, Minn., is visiting friends in Toronto this week.

Mr. W. Willis Mitchell, representing James Cartland & Sons, Birmingham, Eng., is in Winnipeg this week.

Mr. S. A. Crowell, of Yarmouth, N.S., was a welcome visitor at the works of the Montreal Rolling Mills Company, and also of the Canada Paint Company, Montreal, this week. Mr. Crowell was accompanied by Mrs. Crowell and spent several days renewing acquaintanceship with old friends. He is by no means a stranger in Montreal.

Mr. J. A. Henderson, who for several years has been connected with the firm of Henry Rogers & Sons, Montreal, has severed his connection with this firm. It is Mr. Henderson's intention to start business for himself in Montreal as a manufacturers' agent, and on Saturday last he left Montreal for London, England, in order to secure some English agencies. Mr. Henderson is a son of J. M. Henderson, manager of the H. R. Ives Co., Montreal.

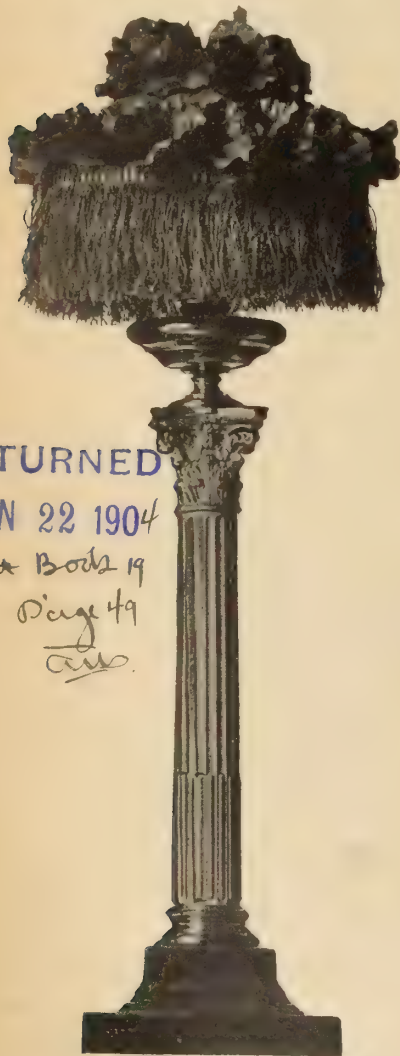
Mr. Arthur Pratt, Sydney, Australia, is spending some weeks in Canada in an endeavor to establish business connections with some Canadian exporting concerns. Mr. Pratt has for some time been a member of the staff of the Australian trade journal, Hardware and Machinery, but has severed his connection with that paper to accept manufacturers' agencies, with his headquarters at Sydney. Mr. Pratt is at present stopping at the King Edward Hotel. Any manufacturers desiring to receive information about the possibilities of Australian trade might to advantage communicate with Mr. Pratt.

Mr. Geo. E. Drummond, president of the Montreal Board of Trade, and of the Canadian Manufacturers' Association, returned home Saturday last on the Allan ss. Bavarian. Mr. Drummond has spent three months' vacation, partly in France and Switzerland, and partly in Great Britain. He stated that Canada was on the tongue of the Old World; in fact, he used the expression, that Canada was the hope of the Old World, and the pride of the new. He complimented Lord Strathcona for his inestimable services as High Commissioner. He had much also to say about the prominence of the Chamberlain preferential issue. He believed that the policy of Mr. Chamberlain would ultimately triumph; in fact, he said that if it did not triumph at the next general election, it would only be a matter of time. Mr. Drummond is looking very well indeed, and seemed very sanguine as to the rare possibilities of Canadian trade in the Old World.

ELECTRICAL GOODS AND SUPPLIES

ELECTRICAL ILLUMINATION.

OF late years no other factor has added more towards making the interior of the home beautiful than the adoption of appropriate and artistic electric fixtures. The general use of electric lighting has created a demand in this line that has



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been well met by the manufacturers. The handsome designs now turned out in establishments are in many cases works of art that come in for considerable admiration.

The hardware dealer should attract the ladies to his store, and open up a new source of revenue. There is no easier way for him to do this than by laying in a generous stock of electric fixtures, and showing them to advantage, which increases very much the appearance of his store. If these are spoken of to customers, and judiciously

advertised, the hardware merchant in a town where electricity is used is assured of a profitable addition to his business.

The illustration shown here represents one of the handsome electrical fixtures manufactured by Munderloh & Co., Montreal.

A DIFFICULTY.

SOME hardware merchants seem to imagine that they are not competent to undertake an electrical department in their store because they are not practical electricians and have no knowledge of the theory of electricity. One or two hardware merchants have told the writer that they are interested in this new department but, for the reason just stated, are of the opinion that the field for the hardware store to develop is a limited one.

Objections are always welcomed; they show that merchants have been thinking. Hardware and Metal is always ready to open its columns to a discussion of trade questions and difficulties. A full discussion of any point is almost sure to point the way to its solution.

But all this is aside from the question. There are hosts of electrical novelties and electrical staples which the hardware merchant may sell—and incidentally make a good profit—without being possessed of any practical knowledge of electricity.

There is a profitable trade to be developed in fixtures—plain and fancy. Perhaps it will be necessary to instal these for customers, but there is nothing in this that should frighten any merchant. Every hardware store has a handy man in its employ, or perhaps a member of the firm who is quite competent to attend to this work. It is not difficult; the supply houses will furnish full directions, and all that is needed is a little common sense in a man ordinarily handy with tools. In most instances the wiring will be done by the electric light company. Even this should not be beyond the capabilities of the ordinary hardware store.

Electric fans should sell well at this season. One or two kept running in the store would advertise and display themselves and make many sales. They are a profitable line to handle and, as was explained in these columns before, they are as easily installed as an ordinary incandescent lamp.

Electric flash lights are a quick selling novelty which need only to be advertised and displayed to bring dollars

to the hardware store which handles them. Quit cutting prices on nails and turn your attention to the development of this profitable side line. There is more money in it and it is easier on the temper.

De Laval Steam Turbine.

The De Laval steam turbine is a pure impact turbine, with a single turbine wheel, carrying one row of buckets, to which the steam is delivered in free jets at the highest possible velocity. These steam jets come from stationary nozzles, tapering so as to increase their cross sectional area towards the outlet end of the nozzle, and so calculated that the steam, before leaving the nozzle, has fully expanded down to the pressure prevailing in the exhaust chamber of the turbine, and has assumed a corresponding high velocity, so that its whole available energy has been transformed into kinetic energy.

GEORGE T. PEPALL MARRIED.

ON Wednesday afternoon George T. Pepall, of Samuel, Benjamin & Co., Toronto, was married to Miss Ethel B. Le Roy, daughter of Edmund B. Le Roy, of that city. Mr. and Mrs. Pepall are spending two or three weeks' holidays in Boston, the



George T. Pepall.

White Mountains, Adirondacks, and at the Atlantic seashore. Among numerous gifts were a splendid cabinet of solid silver from the Samuel, Benjamin & Co. firm, and a traveling bag from his fellow employees. Hardware and Metal unites with many others in extending congratulations.

Business Changes

ONTARIO.

D. Fraser, general merchant, Vernon, is dead.

John R. Brown, blacksmith, Madoc, has assigned to James C. Dale.

A. Albin, general merchant, Glen Robertson, has assigned to W. A. Cole.

D. C. Leekie, general merchant, Combermere, has assigned to J. H. Reeves.

W. J. Bradley & Co., harnessmakers, Leamington, have assigned to John Crocker & Son.

Fraser, Johnson & Co., saddlery hardwaremen, Hamilton, have assigned to F. H. Lamb.

The Expansive Tree Protector Co., of Ontario, Limited, Toronto, have advertised their assets for sale.

N. Ladouceur, blacksmith, Prescott, has admitted John E. Billings, under style of Ladouceur & Billings.

J. A. L. Ellacott, dealer in bicycles and electrical supplies, Ottawa, has sold out his machine shop to E. F. Bonsell.

QUEBEC.

Andrew Young, machinist, Montreal, is dead.

F. Cook, general merchant, New Carlisle, is dead.

N. McPhail, general merchant, Grand Entry, is dead.

J. E. Stearns, general merchant, New Carlisle, is dead.

H. Verreault, saddler, Levis, has appointed V. E. Paradis curator.

La Compagnie Galvane Platie, nickel platers, Quebec, have registered.

L. Paquette, general merchant, Ripon, has sold out to W. Joubert.

Quintal & Desmarais, general merchants, St. Nazaire, have registered.

H. Verreault, saddler, Levis, has advertised business to be sold on the 21st inst.

Arsenault Bros., general merchants, Tang Du Nord, have dissolved partnership.

E. C. Mount & Co., plumbers, Montreal, have assigned to Lamarche & Benoit.

Bigonnesse & Seguin, general merchants, Labelle, have assigned to H. Lamarre.

F. Gareau, general merchant, Rigaud, is offering his creditors 35c on the dollar.

The assets of Joseph Lambert & Fils, plumbers, Montreal, were advertised for sale on the 16th inst.

The assets of Ed. Villeneuve, general merchant, Jonquieres, are advertised for sale on the 17th inst.

Ball, Robert & Co., marble and file workers, have registered. Robert Ball, Benj. Rodler & David Ball.

J. Fisher & Co., general merchants, Jonquieres, have assigned to V. E. Paradis, who is appointed provisional guardian.

Lefebvre & Lariviere, hardware, paint and oil dealers, St. Hyacinthe, have registered. Jos. A. Lefebvre & Jos. O. Lariviere.

The assets of T. Boudreau, general merchant, St. Francois Des Salle (Chicoutimi Co.), were advertised for sale on the 14th inst.

NOVA SCOTIA.

Co-partnership for M. Jones and G. R. McPherson, general merchants, Springhill, has been registered to do business under the style of Wm. McPherson & Sons.

NEW BRUNSWICK.

Dunbar & Sons, machinists, Woodstock, sustained loss by fire; partially covered by insurance.

MANITOBA AND N.W.T.

Scott Bros., general merchants, Carlyle, have sold out.

W. H. Peever, harnessmaker, Elkhorn, has sold out to A. P. Rusk.

The Calgary Construction Co., Limited, Calgary, are incorporated.

G. Pattison, plumbers, Calgary, are succeeded by Pattison & Pleiffer.

Walter Bristow, hardwareman, Neepeewa, has sold out to J. H. Wilson.

Sipes & Coventry, general merchants, Drinkwater, have been burned out.

Rollins & Bissett, general merchants, Macoun, have dissolved partnership.

H. Pickering, general merchant, Wilcox, has sold out to L. D. Sparling.

Ross & McCutcheon, blacksmiths, Alameda, have sold out to Ross & Manns.

John Gibson, general merchant, Craik, has sold out to Berg & Lawson.

T. P. Malone, general merchant, Penhold, has sold out to Wilson Bros.

Walsh & Tadman, general merchants, Yorkton, will be succeeded by L. Walsh.

A. Cameron, general merchant, Rocanville, has advertised his business for sale.

The Fairchild Co., Limited, wholesale agricultural implement dealers, Winnipeg, have increased their authorized capital from \$100,000 to \$400,000.

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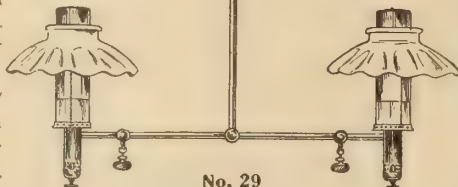
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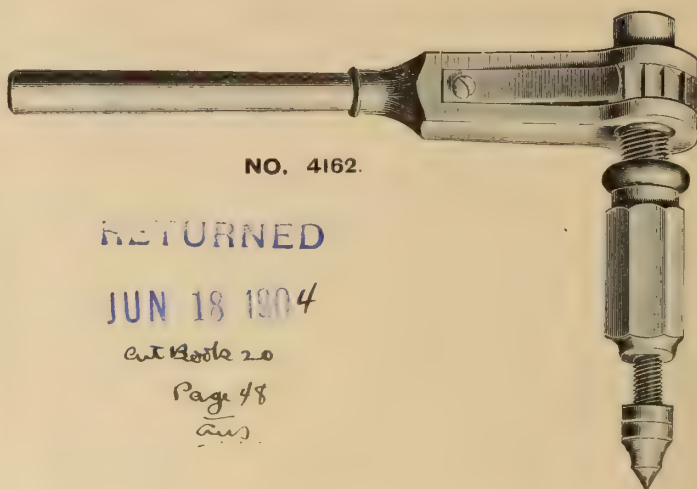
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METHODS FOR EXPANDING CANADIAN TRADE.

THE Government have been doing a useful work of late years in appointing commercial agents at the various important centres of the world's commerce, but singularly enough they have always failed to make any connection with the prime market of the world, namely, London itself.

The Department of Trade and Commerce, under the direction of Sir Richard Cartwright, has done good work in developing Canadian trade in agricultural products, but it has failed in a serious manner in its obligations to Canadian manufacturers of other products desirous of working up a foreign trade.

So apparent has the neglect of this great distributing centre been, that there is an active agitation now on foot in the Manufacturers' Association, looking toward the appointment by that association itself of an agent of its own, amenable to its laws and regulations, and paid for by themselves. This is following the suggestion made in these columns some weeks ago.

We do not see why one should conflict with the other. The Government agent could never be the free, untrammelled man that the association's agent would necessarily be, and yet in many ways the Government agent could do work which the association's agent could not possibly attempt, by reason, mainly, of his official position.

That the Manufacturers' Association will no doubt proceed with their plan is undeniable, because they generally do what they set out to do, but we do hope that when they act they will see that it will be necessary that their agent shall be a representative of Canadian manufacturers in general, and not only those who may belong to the association, numerous though they are.

The main difficulty about a movement of this kind is how to finance it. The average business man will positively delight in spending money in furthering his own personal interests, but get a crowd of them together, all able to do almost anything financially, and they will become over cautious at a few dollars almost to the humorous point. The whole thing is a question of co-operation, and for a very small amount per member a first-class educating and inspiring display of Canadian manufactures could be made in London, and considerable business developed thereby.

And it must not be forgotten that the cheese man, and the butter man and the apple packer and numerous other people of this kind, are just as truly Canadian manufacturers as the producers of iron and wood and other things. Let us look at this in a broadminded way, and drop our tendency to localism and small trade. We have everything in this country to do things largely, and as we build now, so will the trade of the future expand.

CONSOLIDATION OF MARITIME BOARDS OF TRADE.

THE Maritime Board of Trade, which will shortly enter upon its second decade, has attained a position of substantial influence fully justifying

its formation. While our fellow citizens in the Atlantic provinces fully concede the paramount importance of developing our western heritage to the fullest extent, they are thoroughly alive to the urgent necessity of conserving the interests of the eastern end of the Dominion, without which the integral existence of Canada would be greatly retarded. The deliberations of this body have been carried on at its nine annual gatherings with a vim and determination that augurs a bright future for its continued progress. The resources of the Atlantic provinces are so varied as to require sustained effort year by year to develop the expansion of which they are capable.

The questions incident to this development have been threshed out with commendable activity by the officials and members of the Maritime Board, which, as stated in President Haszard's report of August, 1903, now comprises no less than 33 affiliated boards with an enrolment of over 2,000 members. Among the leading questions on its agenda paper, the fast Atlantic service has been one persistently urged at each successive meeting.

President Haszard tersely pointed out at its last discussion the anomaly of a detour of hundreds of miles in reaching Canada via the United States in comparison with nearer Canadian home ports. This humiliating recourse to distant foreign ports for ocean mail purposes will always prove a factor of consequence in causing further legislation on the part of our Newfoundland neighbors to the end of rounding out our territory by the long desired union.

While ocean transportation, shipbuilding and the harvests of the sea have absorbed requisite attention, the Board has dealt thoroughly and exhaustively with agriculture, improved stock breeding, fruit farming, mining and manufacturing, in all their branches, also steadily promoting railway development throughout the length and breadth of the sea-girt provinces. A subject which bears every indication of proving one of engrossing interest at the coming annual meeting in August next, was informally discussed at Charlottetown on a notice

of motion, viz.: Legislative union of the Maritime Provinces.

Sooner or later this question, fraught with significance to the future of the Atlantic provinces is certain to come within the range of action. The advantages to be derived from a concentration of maritime effort, especially with the addition of Newfoundland and the diminution of expense by the curtailment of useless and cumbersome petty legislatures, are so manifest as to insure successful accomplishment when the proper course of action is earnestly advocated.

THE ONTARIO NICKEL DEPOSITS.

MR. C. M. SCHWAB, former president of the United States Steel Co., and who organized the International Nickel Co., which took over all the Canadian properties and most of the principal properties in New Caledonia, the only place where nickel is found in quantities that will compete with Canada, has sold his interest to a syndicate composed of E. C. Converse, Joseph Wharton, Col. Robt. M. Thompson and Capt. De La Mar. This places the nickel industry in the absolute control of these gentlemen.

Mr. Schwab was a great believer in the future of the nickel industry in Canada. At one time the threats made upon interested parties almost led Mr. Schwab to decide upon closing down the industry in Canada entirely and depend upon the richer but less accessible mines in Caledonia. Assurances were given, however, by Ontario authorities that he would not be interfered with, and extensive developments were begun. An entirely new plant has been put in and it is expected that before long a very material increase in the production will occur.

While New Caledonia ores run much higher in nickel, the Canadian ores contain, besides nickel, copper and several other valuable minerals, which at the present time make them of great value.

The president and manager of the company is Mr. Ambrose Monnell, for some time Mr. Schwab's assistant in the steel company, and one of the brightest of the young generation of American business men. Colonel Thompson has not been much heard of in public, yet to him, more than to any one else, is due the development of this industry in Canada.

THE NEW TARIFF REGULATIONS.

UNDOUBTEDLY the most widely discussed clause of the new tariff regulations is that designed to prevent "dumping" of foreign goods on the Canadian market. Scores of lines will, it is claimed by both manufacturers and importers, be affected.

The working-out of the clause against "dumped" goods coming in under the general tariff may be illustrated by the following example:

A line of stoves, sold in the United States for \$100, is sacrificed in Canada for \$80. Assuming that the duty upon them is 30 per cent., the stoves laid down in Canada would cost under the old arrangement:

Special price fixed by seller.....	\$ 80
Duty 30 per cent. on home price (\$100).....	30

Total..... \$110

Had the stoves been sold at their regular price, \$100, they would cost \$130 in Canada. The sacrifice is therefore \$20. Under the new law this special cut in price becomes a special duty up to 50 per cent. of the regular duty.

A SUGGESTION TO MACHINISTS.

Have you read the advertisements in this issue of **HARDWARE AND METAL**? In doing so do not fail to read the condensed advertisements on page 22.

Thus, under the tariff as it now is, the stoves laid down in Canada would cost:

Special price fixed by seller.....	\$ 80
Duty 30 per cent. on home price (\$100).....	30
Special duty, 50 per cent. of regular duty....	15

Total..... \$125

Or only \$5 less than they would have been had the United States manufacturer sold the stoves at the regular prices.

Importers state that this will effectually shut out some lines of American goods from the Canadian market, and will interfere materially with the sale of many others.

A CLAIM OF UNFAIRNESS.

In some cases, it is maintained by importers, that the special duty will be an injustice. The Canadian manager of a United States firm controlling their own factory argues that the clause is unjust in its effect on their business.

"For instance," he said, "in case we are shipping from our American factory \$800 worth of goods, this figure being taken at the invoice price from the fac-

tory to the selling department, which includes a profit to the factory and owners of stock in that part of the organization. Now suppose a fair selling price on this amount of goods has been fixed by the customs at \$1,000, we as importers would then, according to the terms of the tariff, be called upon to pay to the Government 30 per cent. duty on \$1,000 worth of goods, amounting to \$300, and would also be asked to give the difference between \$800 and \$1,000, or \$200 more, were it not for the fact that a 50 per cent. limit is put upon the surtax, which would limit the extra duty to be paid to \$150, amounting to a duty of 45 per cent. upon the Government valuation, or over 56 per cent. upon the factory value of the goods.

This would mean that the manufacturer would then have to pay \$450, plus \$800, for manufacturing, meaning a total of \$1,250.

"Now, suppose that a competitor of his, operating a factory in the United States, sells to the jobber in Canada what would practically amount to the same bill of goods; he, however, sells these at somewhat greater advance than he would to a branch house of his own concern, and he charges \$900; this would mean that the Canadian jobber, if he were honest, would have to amend this to \$1,000, and he would in turn be called upon to pay \$300 duty on the fair selling price of \$1,000, plus \$100 difference, which would make only paying duty to the extent of \$400, whereas the concern having its own branch in Canada would be taxed by the Government \$450 for the same volume of goods.

"Now, is there any reason why one concern should pay more duty than another on goods which are identically the same?

"Again, suppose this branch house of the American concern shipped goods to itself in Canada, it would have to, practically, pay 45 per cent. duty on \$80, whereas if it shipped goods from its home office in the States direct to its customer here, it would only have to pay 30 per cent. duty on \$100; in both cases on the fair selling price in the United States.

This importer also believes that a tariff of this kind is impossible to enforce for the amount of extra duty to be paid to the Government will be the same as the extra price he would have to pay manufacturing in the United States to bring the value of the goods

invoiced up to a fair selling price in the United States, and it would be much more natural for the importer to say to his friend that he would prefer to pay the full American price, and receive a rebate from his correspondents at the end of the year.

A MACHINERY FIRM'S VIEW.

R. McDougall Co., Limited, Galt, Ont., express their opinion of the tariff as below:

"We have your favor of the 14th inst., making inquiry re tariff changes on goods which we manufacture. In this matter, we might say that while we have given the subject some consideration, still we are not sure that we are taking the correct view of the matter, as there appears to be a multiplicity of opinions as to the meaning of the dumping clause. If we understand the matter correctly, we think that a very fair proposition has been made by the Finance Minister, and if the Customs Department carry out the arrangement, as it should be carried out in order to be of any benefit at all, then there is no question but that benefit will result; because, as far as we are concerned, our goods have been slaughtered in this market for several years, and the freight rates, added to enhanced cost of material, have left us a very small margin of profit. We hope the scheme is workable, still it appears that a straight advance in the tariff would have simplified matters very much."

SOME OPINIONS IN BRIEF.

T. G. Dexter, of H. S. Howland, Sons & Co., Toronto, said: "The difficulties are more than one can imagine. It will be necessary for the customs officials in all parts of Canada to have access to correct information regarding the exact value of all classes of goods in all countries. There will be many methods of defeating the measure. For instance, some goods made in the United States can be bought on the English market at the ruling price there and brought into Canada at lower prices and lower duties than from the United States. That is only one plan; others will develop as time goes on."

The London Machine Tool Co. write: "With reference to your favor of the 14th, re tariff changes, we should be glad to have fuller particulars of the bill before expressing our opinion. Certain lines of brass finishing machinery are to be admitted free of duty, and until we have fuller particulars as to what is stated under this heading, we cannot express an opinion."

Page-Hersey Iron & Tube Co., Ltd., Guelph, Ont., say: "Replying to yours of the 14th inst., respecting the recent changes in the tariff. The clause respecting 'dumping' should be of benefit to the iron manufacturers if it could be properly enforced."

The John Bertram & Sons Co., Ltd., Dundas, Ont., write: "In this connection, would say that it is rather early to give an opinion from our standpoint, because it seems a question of how the law is carried out in the departments, and until we have had some personal experience we would not care to place ourselves on record with regard to tariff matters."

THE CHANGE IN GLASS.

Canadian glass importers are considerably exercised over the change in the tariff relating to glass, this change being the reduction of duty on British glass from 13 1-2 to 7 1-2 per cent. They say it means the entire shutting out of Belgian glass from the Canadian market.

A. Ramsay, of A. Ramsay & Son, speaking to a representative of Hardware and Metal in this connection at the time the announcement was made, said that the change was so severe and detrimental to the glass importers in Canada that they at once decided to call a meeting of those interested in glass importation, to discuss the question of the change. He said: "The change, with the British preference inserted, means the placing of practically all the glass trade of Canada in the hands of one British firm, represented in this country, and they can supply but a small portion of the demand. It means that this firm controls the market as far as prices are concerned." In reference to the delegation at Ottawa, he said: "We met with a cordial reception at the hands of the Hon. W. S. Fielding, and were given every consideration, and assured that the matter would be carefully considered. However, nothing more will be known for a few days at least."

F. B. Bamford, of Pilkington Bros., in discussing the question, said: "The change in tariff will help us some, but not to such a great extent as it looks on paper. The effect will probably be an increase in the price of glass, and the Belgian exporters will no doubt have to lower their present prices to compete. At the present time the Belgian manufacturers export one-half their output to Great Britain and the colonies, and sixty per cent. of the glass that comes

to this country is of that manufacture. There will be no more exclusion of Belgian glass under the new tariff than there was before."

A CORDAGE MAN SATISFIED.

W. B. Converse, of the Consumers' Cordage Co., Montreal, stated to Hardware and Metal on Wednesday that he was well pleased with the tariff changes, so far as they affect the cordage industry. The increased protection against Great Britain will be of considerable advantage. "The clause as to dumping, if carried out, and I believe it will be," said Mr. Converse, "should be equal to 10 per cent additional protection to all manufacturers. It will protect us when we need protection most, and it ensures a moderate tariff when foreign competitors are not offering slaughter prices."

"What about binder twine, Mr. Converse?"

"We did not expect any protection on that," was the reply. "It is easier to take off a duty than to impose one. The mischief was done some years ago, and we can't help it now."

PRICE CHANGES OF THE WEEK.

QUOTATIONS on bolts and nuts have been changed, the discount in many sizes being reduced, the present discounts being: Carriage bolts (\$1 list), 3-8 and smaller, 60 and 10 per cent.; carriage bolts (\$1 list), 7-16 and larger, 55 and 5 per cent.; carriage bolts (\$2.40 list), Norway iron (\$3 list), and machine bolts, 3-8 and under, 60 per cent.; machine bolts, 7-16 and larger, plow bolts, blank bolts and bolt ends, 55 and 5 per cent.; sleighshoe bolts, 70 per cent.; coach screws, 70 and 5 per cent.

Linseed oil prices have been advanced 1 to 2c per gallon. One quotation is: Raw, 1 to 4 bbls, 41c; boiled, 44c; 5 to 9 bbls, raw, 40c; boiled, 43c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points. Another quotation is: Raw, 1 to 4 bbls, 43c; boiled, 46c; 5 to 9 bbls, 42c; boiled, 45c; 10 barrels and over open, ex-Toronto, 2 per cent. off 30 days.

Turpentine prices have been reduced by some dealers 1 1-2c per gallon, the quotations now being: Single barrels, 83c; 2 to 4 barrels, 82c, ex-Toronto, 2 per cent. off 30 days.

Discounts on all lines of cast iron pipe fittings have been increased 2 1-2 per cent., the scale now being: Cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6-inch inclusive, 67 1-2 to 70 per cent.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL.

232 McGill Street.

Montreal, June 17, 1904

JUNE is not considered one of the best months for the hardware trade, but a fair business is generally counted on, and so far this month has been no exception to the general rule. While there is no great rush this week, ordinary business may be said to be good, and in some lines brisk. Sorting up orders are coming in fast, and the greater share of the hardware business at present is from this source.

The recent changes in the tariff have been fully discussed by the trade from all points of view, and the general belief is that the immediate effect of the dumping clause will be towards an increase in the price of heavy building hardware, such as is imported from the United States, and in arms and ammunition. This clause means a much higher duty on American goods, consequently they are going to cost more in Canada. Prices remain steady, except for a lowering of 10 per cent. in galvanized buckets. Otherwise, the market is strong and prices are firm.

The cement trade is picking up slightly since the dull weather; however, it is not as good to a considerable degree as it was last year. The reason given for this is that building is not as brisk, and that municipalities are not putting in granolithic pavements to as great an extent as last year. The shortage in screws, which had been almost caught up with last week, is again apparent. The shortages in other lines seem to have been overtaken. Inquiries are numerous, and collections fairly good.

Washing Machines—The demand has fallen off somewhat this week, and few sales are taking place. We quote as follows: Round (three legs), \$35.00 per dozen; round (four legs), \$39.00 per dozen; square (regular size), \$42.00 per dozen; square (smaller size), \$36.00 per dozen; round rotary, \$56.00 per dozen; square rotary, \$59.00 per dozen; "New Century," \$72.00 per dozen.

Lawn Mowers—As mentioned last week, the wonderful growth has had a decided effect on the sale of lawn mowers, and a big business is being done. Prices are the same. We quote as follows: With 8-inch wheel, sizes 12, 14 and 16 inch, \$2.65 each; with 9-inch wheel, size 12, \$3; size 14, \$3.12 1-2; size 16, \$3.25 each; Philadelphia pattern, size 12, \$3.25, size 14, \$3.50; size 16, \$3.75 each; High Wheel,

size 12, \$4; 14, \$4.25; 16, \$4.50; 18 \$4.75; 20, \$5.25 each.

Garden Hose—There is an active market, and sales are reported good. Discounts continue: Trade, 75 per cent.; Western, 65 and 10 per cent.; White, 40 and 10 per cent.; Maroon, 40 and 10 per cent.; cotton, 60 per cent.

Hose Reels—A fairly good business is being done. Prices 15 to 25 per cent. higher than last year.

Lawn Sprinklers—The demand is good, in spite of the wet weather. Prices as before, from \$2.50 to \$18 a dozen.

Ice Cream Freezers—Sales continue with the same brisk tone that has attended this line for some weeks. We quote the following range of prices for the leading brands: One quart, \$1.50 to \$1.60 each; 2 quart, \$1.70 to \$1.80 each; 3 quart, \$1.95 to \$2.25 each; 4 quart, \$2.35 to \$2.60 each; 6 quart, \$2.95 to \$3.25 each; 8 quart, \$3.70 to \$4.10 each; 10 quart, \$4.75 to \$5.50 each; 12 quart, \$5.75 to \$6.50 each; 14 quart, \$6.75 to \$7.50 each.

Agricultural Wrenches—An ordinary trade, with no new feature.

Harvest Tools—There is a quietness in this line at present. Discounts as before, 60 per cent.

Spring Hinges—Activity continues in this line. We quote as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—Merely a nominal amount of business being done. Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Wire Coat and Hat Hooks—Demand is good this week for wire coat and hat hooks. Prices continue 75c a gross for 3-inch.

Churns—Business in this line has fallen off considerably. Discounts 40 and 15 per cent. f.o.b. Montreal, and 30 and 15 per cent. f.o.b. factory.

Green Wire Cloth—A trade is still being done in green wire cloth. The price is as before, \$1.50 for 100 square feet.

Poultry Netting—This line continues brisk. Discounts for 2-inch 19-gauge standard extras are 60 and 5; for 2-inch 16-gauge the discounts are 55 and 5 per cent.

Galvanized Poultry Netting Staples—Business is good this week in common with poultry netting. Prices are: Sizes 5-8, 3-4, 1 1-8, 10 lb. boxes, \$12.50 list; 25 and 50 lb. boxes, \$12.25 list;

100 lb. boxes, \$12 list. Less 57 1-2 per cent.

Fence Staples—Market continues the same. Prices as follows: \$3 per 100 lb. keg for galvanized and \$2.80 for bright; 25 to 50 lb. packages, 25c extra.

Bed Staples—No new feature to the market this week, which is hardly up to the average. The discount on the Montreal Rolling Mills Company's and the B. Greening Wire Company's lists is 57 1-2 per cent. The discounts on the Dominion Wire Company's list are 25 and 21-2 per cent.

Blind Staples—Not much business being done. Discount as before, 40 per cent.

Galvanized Coil Spring Wire—Demand is not very brisk. Our quotations are as follows: Nos. 6, 7 and 8, \$3.20; No. 9, \$2.70; No. 10, \$3.30; No. 11, \$3.35; No. 12, \$2.95; No. 13, \$3.10. Carlots 5 cents less. Freight prepaid is less than carlots to extent of 25 cents and in carlots to the extent of 20c.

Galvanized Wire—This line is moving fairly well. We quote as follows: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots 12 1-2c extra per 100 lbs will be charged.

Barb Wire—Business continues brisk, with no dropping off in volume of orders. We quote: \$2.75 per 100 lbs. f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Carlots of 15 tons 2.40 f.o.b. Cleveland.

Smooth Steel Wire—The market is somewhat dull. We quote: Bright and annealed, \$2.50 per 100 lb. f.o.b. Montreal, Toronto, Halifax, London, Hamilton and St. John. Net extras per 100 lb are now as follows: Coppered wire, 60c; tinned wire, \$2; oiling, 10c; spring wire, \$1.25; best steel wire, 75c; bright soft-drawn, 15c; hay-baling wire, 20 to 25c.

Annealed Hay Wire—Business continues quiet, with prices and discounts as before.

Fine Steel Wire—A moderate demand is reported this week. Discounts 25 per cent., with net extras as follows: 1 and 2 lb. hanks, 25c per 100 lbs.; 1-2 lb. hanks, 37 1-2c; 1-4 lb. hanks, 50c.

Brass Wire—A small trade is reported. Discount as before, 60 per cent.

Copper Wire—There is a fair amount of business being done. Discount, 60 per cent.

Galvanized Buckets—There is a reduction of 10 per cent. this week. The discount is now 50 per cent.

Rivets and Burrs—Business is fairly good this week. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off and coppered iron rivets and burrs, in 5-lb carton boxes are quoted at 60 and 10 per cent. off list.

Tinned Roofing Caps—No change this week. Prices as before, 6c a lb.

Screws—There is an apparent shortage again this week, although manufacturers had caught up fairly well with the demand last week. A lively trade is reported. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—Prices remain steady and it is expected that Canadian manufacturers will be well able to meet American competition in this line. The new prices quoted last week still hold. A good trade is reported. We quote discounts as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter, and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3) list, 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 per cent.; nuts, square, all sizes, 4c per lb off; nuts, hexagon, all sizes, 4 1-4c per lb off.

Washers, 45 per cent. off.

Cut Nails—The demand for cut nails continues very brisk, and the supply is said to be good. We quote as before, \$2.30 per keg, f.o.b. Montreal, Hamilton, Toronto and St. John.

Wire Nails—A lively tone to the market, and as is the case now with cut nails, the supply is fairly good. We quote the following prices: \$2.40 per keg carlots and \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Pressed Spikes—A fair trade. Discount as before, 25 per cent.

Horse Shoes—Business is reported good. Our quotations are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Shoes more than one size in

a keg, 10c per keg extra f.o.b. Montreal only.

Horse Nails—An active trade is being done in horse nails. We quote C brand 40, 10 and 7 1-2 per cent. off list; other brands 55 per cent. off list.

Shot Guns—This line is moving well, with still a slight shortage.

Cordage—Business is brisk, and dealers report a lively trade. The market is steady. We quote as follows: Pure manila, 15c; British pure manila, 12 1-2c; sisal, 12c; double lathyrarn, 11c; single lathyrarn, 10 1-2c; Russian tarred spunyarn, 13 1-2c; jute rope, 3-8-in in diameter and upwards, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply. Cotton bedcord, 90c to \$1.70, according to length. Sash cord 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Roofing Pitch—The demand is good, as there is a great deal of roofing being done at the present time. Price the same, \$1 per cwt.

Building Paper—A bright and active tone to the market. We quote as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Firebricks—Business is not as good as might be expected at this time of the year.

Cement—This week finds no improvement in the cement business. The sluggish market is said to be due to the inactivity in building, and to the fact that municipalities are not putting in granolithic pavements to as great extent as last year. Prices remain unchanged at former quotations, which are: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex-cars.

PLUMBING GOODS.

No official changes in iron pipe have been announced, but there is no pretence that prices quoted are being followed closely. Large sales are being made at considerable concessions. At present it is impossible to quote with any approach to exactitude. In general lines of plumbing supplies there is an active trade, and except in iron pipe prices appear to be pretty steady. Solder is weaker on account of the decline in tin, but for ordinary business there is no change in quotations. For good quantities the price would, no doubt, be shaded. Soil pipe and lead pipe are both in steady demand.

Lead Pipe—A good average business is doing in lead pipe at steady and unchanged prices. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent., f. o. b., Montreal,

Toronto, St. John, N.B., and Halifax; f. o. b. London, 15c per 100 lbs. extra; f. o. b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—Business is of average volume. We quote discounts as follows: Light soil pipe, 3 to 6 in., 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8-in, 45 per cent. Light fittings, 2 to 6-in, 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6-in, 60 and 5 per cent.; extra heavy fittings 8-in, 45 per cent.

Iron Pipe and Fittings—Subject to remarks in the introductory paragraph above as to concessions obtainable, we quote the following official prices: Standard pipe, per 100 feet, in length under 19 feet—black, 1-8-in, \$2.30; 1-4-in, \$2.30; 3-8-in, \$2.55; 1-2-in, \$2.85; 3-4-in, \$3.65; 1-in, \$5.20; 1 1-4-in, \$7.35; 1 1-2-in, \$8.95; 2-in, \$12.55. Galvanized—1-4-in, \$3.20; 3-8-in, \$3.45; 1-2-in, \$3.90; 3-4-in, \$5; 1-in, \$7.20; 1 1-4-in, \$10.05; 1 1-2-in, \$12.20; 2-in, \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends, are quoted per 100 feet as follows: Black, 1-2-in, \$4.20; 3-4-in, \$5.25; 1-in, \$7.55; 1 1-4-in, \$10.55; 1 1-2-in, \$12.75; 2-in, \$17.60. Galvanized—1-2-in, \$5.25; 3-4-in, \$6.65; 1-in, \$9.55; 1 1-4-in, \$13.25; 1 1-2-in, \$16; 2-in, \$21.90. The discount on all sizes of extra heavy pipe is 12-12 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent discount and 1-2 in. to 6 in. 70 per cent. discount.

Solder—The market is weaker, because of the decline in tin, but no actual change has been made in quotations. In large quantities, concessions would, in the present condition of the tin market, be easily obtainable. Bar solder is quoted at 17 1-2c, and wire at 18c.

METALS.

General business in metals and heavy goods is of satisfactory volume on the whole, although some sellers say that it is not up to expectations. The pig iron market is very quiet, but in the present condition of affairs nothing else is expected. There is considerable business, but not for forward delivery. Bar iron is selling in large quantities. Changes in price are not numerous this week. The tin and copper markets are weak, and an actual decline of another half-cent is noted in both items. Advice to-day say that copper is steady at present figures, but tin is an uncertain quantity. Since last report, pig lead suffered a decline, but there has been a recovery and former quotations still obtain.

Pig Iron—There is nothing new in the situation. The future of the market being somewhat uncertain, buying is strictly confined to present requirements. Nominally, at least, there have

been no changes in price, and we still quote as follows:

"Disc," No. 1.....	\$17.50 delivered Montreal.
"Dom.," No. 1.....	13.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50 " "
Glenarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.00 " "
(special).....	17.50 " "
Ayresome No. 1.....	17.50 " "
" No. 3.....	16.90 " "
Clarence No. 1.....	16.25 " "
" No. 3.....	16.00 " "

Bar Iron—Business is very active, several very large sales having been made recently, and the volume of small orders having been very satisfactory. We quote: Merchants' bar, \$1.75; horse shoe iron, \$2; forged iron, \$1.95.

Merchant Steel—A steady trade at unchanged prices. We quote: Sleigh-shoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.55; machinery (iron finish), \$2.45; square harrow, \$2.45.

Tool Steel—Trade is of average volume. We quote: Black Diamond, 8c to 9c; Sanderson's, 8 to 9c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c.

Black Sheets—Business is brisk. We quote: 28-gauge, \$2.35; 26-gauge, \$2.30; 22 to 24-gauge, \$2.25; 19 to 20-gauge, \$2.20; 8 to 10-gauge, \$2.35.

Galvanized Iron—Trade is very active this week. Prices throughout are as before: We quote: 28-gauge, Queen's Head, \$4.30; Gorbals' "Best Best," \$4.30; Apollo, 10 3-4 oz., \$4.30; Fleur-de-Lis, \$4; Comet, \$4; Bell brand, \$4. "Windmill Best," \$4. In less than case lots, 25c extra.

Canada Plates—There has been no change in local quotations, but considering the strength of the primary markets prices here are very low. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized, \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Sheet Zinc—There has been no change since last week, and the remarks then made still apply. Cask lots are selling at \$6.25 to \$6.50. Small quantities, \$6.50 to \$6.75.

Zinc Spelter—Quoted at 6c, subject to concessions for quantities.

Tinplates—Market firm. No change. Cokes, \$3.75 and charcoal, \$4.

Ingot Tin—The market is weaker and there has been another decline of 1-2c. Local houses now quote 30 1-2 to 31c. The minimum price would be shaded for quantities.

Ingot Copper—New quotations are 13 1-4c to 13 1-2c. The former price is pretty firmly maintained.

Pig Lead—Since last report, the market declined, but there has been a re-

covery, and former quotations of \$3.25 to \$3.35 again apply.

Coil Chain—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4-in, \$6.10; 5-16-in, \$4.70; 3-8-in, \$4; 7-16-in, \$3.80; 1-2-in, \$3.70; 9-16-in, \$3.55; 5-8-in, \$3.35; 3-4-in, \$3.30; 7-8-in, \$3.25; and 1-in, \$3.20 with 10c allowance on carlots.

Scrap Metals and Old Materials—No change this week. We again quote: Heavy copper and wire, 10 1-2c to 11c per lb.; light copper, 9 1-2 to 10c; heavy red brass, 9 1-2 to 10c per lb.; heavy yellow brass, 8c; light brass, 5c; lead, 2 3-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$14 to \$15; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 5 to 5 1-4c per lb.

HIDES.

No change has taken place in hides this week. We quote:

No. 1 beef hides.....	0 08 0 08 1/2
No. 2 ".....	0 07 0 07 1/2
No. 3 ".....	0 06 0 06 1/2
Lambskins.....	1 00
No. 1 calfskins.....	0 11

ONTARIO MARKETS.

Office of HARDWARE AND METAL,
10 Front Street E.
Toronto, June 18, 1904.

CONFIDENCE is still manifested in trade conditions. The manufacturers and wholesale dealers in lead pipe, shot, tacks, wire nails, screws and rivets have held meetings during the week. In each case the present conditions were so favorable that no changes were made. In bolts and nuts the discounts have been increased from 5 to 10 per cent. on some sizes. In other lines there does not seem any disposition to change prices, but the meetings of the manufacturers may result in some further changes. Business continues satisfactory in volume, though it is, generally speaking, of a sorting nature. All seasonable goods are being taken. An improvement in the demand for harvesting tools and in the inquiry for guns and ammunition is reported. Interest in the new tariff regulations is still notable. It is the general feeling that it will take months for the trade to know with any degree of definiteness the effect of the "dumping" clause in the hardware trade. Importers state that it is bound to shut out of the market some lines at present coming in, and to curtail the imports of many others. On the whole, satisfaction is expressed with the new tariff. The strongest objection in hardware trade circles is undoubtedly that of the importers of Belgian window glass, who fear that the increased preference to British glass will wipe out their business. The cordage manufacturers are happy, as are also some manufacturers of hardware who have found the competition of "dumped" goods a serious menace.

Harvest Tools—There is a particularly good demand at the moment for scythes, snaths, and other such lines. Prices are steady.

Sporting Goods—The business in ammunition continues to expand. Some guns and rifles are being taken, but trade in this line is just opening up.

Washing Machines—Business is moderate; prices steady, as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowsell, \$36; New Century, \$72.

Oil Stove Wick—Prices are steady since the advance of about 10 per cent. last week.

Steel Track Door Hangers—We quote as follows: Steel track, 1x3-16 in., \$3.50; 1 1-4 x 3 1-16 in., \$4.50 to \$4.75.

Chain—A good sorting business keeps up. Prices are as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8-inch, \$3.85; 7-16-inch, \$3.70; 1-2-inch, \$3.55; 9-16-inch, \$3.45; 5-8-inch, \$3.35; 3-4-inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Lawn Mowers—Demand for this line now quiet. Prices are unchanged, as follows: Woodyatt, 10 1-2 inch wheel, \$8.50; Star, 9 inch, \$7; Daisy, 8 inch, \$5.75; Philadelphia, 7 1-2 inch, \$7; Ontario, 7 1-2 inch, \$15.80; King Edward, 12 inch, \$9.50 (14-inch cut in above). D. Maxwell & Sons, 10 1-2 inch, \$7.50 to \$10; 9 inch, \$5.50 to \$6.25; 8 inch, \$4.90 to \$5.50. Discount 50 per cent.

Screen Doors—A fair trade is doing in this line. We quote as follows: Common, two or three panel, walnut, 4 inch, \$6.50; yellow and green stained, \$6.75; in natural colors oil finish, \$8.75, with 20c less for 3-inch style.

Screen Wire Cloth—Prices steady at \$1.50 per 100 ft.

Spring Hinges—There is a fair demand. Prices steady, as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Barb Wire—Sorting trade is still good. Prices are steady. We quote as follows: \$2.75 per 100 lbs. f.o.b. Toronto and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—A nice trade continues at unchanged prices. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs extra charged.

Coiled Spring Wire—Sorting orders are still coming in briskly. Prices are steady. Our quotations are as follows: No. 9, \$2.70 per 100 lbs, freights equalized with factory points at Montreal,

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

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DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

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BRAND

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

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BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; earlots, \$2.65, freight allowance to 20c.

Wire Nails—A good business is reported, with prices still steady. Quotations are: \$2.45 per keg f.o.b. Toronto, with earlots \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Business is dull, with prices as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2, and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is still quiet. Prices are unchanged. We still quote discounts as follows: "C" brand, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—An active demand continues. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Business keeps brisk in all sizes, at steady prices. We quote as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—A material reduction in net prices is made by an increase in the discounts. We now quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleighshoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Cordage—The market is easy, but no changes are reported. There is not much doing. Sisal, 10 1-4c; standard, 10 1-4c; standard Manila (550 ft.), 11 1-4c; Manila (600 ft.), 12 1-4c; pure Manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are unchanged as follows: Pure manila, 15c; British pure manila, 12 1-2c; sisal, 12c; double lath yarn, 11c; single lath yarn, 10 1-2c; double shingle yarn, 11c; single shingle yarn, 10 1-2c; sashcord 'Hercules,' 32 to 35c; 'Star,' 36 to 38c; cotton rope, 3-16-inch and up, 20 1-2 to 22c; 5 32-inch, 25 to 27c; 1-8-inch, 25 to 28c; cotton twine, 3-ply 25 to 28c; 4-ply 32 to 34c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Tinned Sheets Tinplates Canada Plates Polished Sheets

ETC., ETC.

FROM STOCK OR FOR IMPORT.

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MONTREAL.

McDOUGALL STANDARD PUMPS



stand the hard usage better than any other pump made, as they are composed of iron and steel, which wears much better than wood.

They are MADE IN CANADA, by Canadian mechanics, and you should handle them in preference to foreign makes.

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The R. McDougall Co., Limited

GALT, ONTARIO.

"ALPHA"

HIGH SPEED STEEL

Crucible Cast Steel
for Tools of all kinds.

"B.C." Miners' Drill Steel

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Canadian Rep.

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NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

Cement—Prices are steady, with a brisk demand reported. We quote: Canadian Portland, \$1.90 to \$2.25; American Portland, \$2 to \$2.10 f.o.b. Toronto.

Firebrick—Trade in firebrick is rather slow this week. Prices are steady, as follows: We quote English and Scotch firebrick at 28 to 30c.

Building Paper—There is nothing special in the market this week. There is a good demand, with firm prices. We quote: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

PLUMBING GOODS.

Building operations in all parts of the country are now exceedingly brisk. All lines of plumbing goods are being asked for. It is evident from the extent of inquiries that the use of enameled baths and wash basins is steadily extending throughout the country. The demand for steamfitters' supplies is fairly good, but the trade in brass specialties for boat supplies seems to be pretty well over. Prices are still being freely cut.

Lead Pipe—An excellent trade is doing. No change in prices is reported. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Business continues fairly brisk. Prices are unchanged. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8-inch pipe, 40 and 5 per cent.

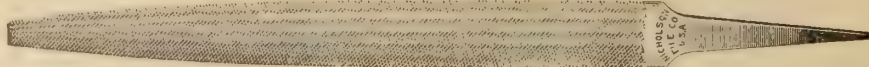
Iron Pipe Fittings—Prices on practically all fittings are being cut. A good business is being done in all lines. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6-inch inclusive, 67 1-2 to 70 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

Iron Pipe—The low prices noted last week still prevail. A good trade is being done at the figures. We quote f.o.b. Toronto as follows: Black pipe, 1-2 in., \$1.95; 1-4 in., \$1.95 to \$2.05; 3-8 in., \$2.15 to \$2.25; 1-2 in., \$2.35; 3-4 in., \$2.95 to \$3; 1 in., \$4.25 to \$4.30; 1 1-4 in., \$5.95 to \$6.10; 1 1-2 in., \$7.15 to \$7.40; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.70 to \$2.85; 3-8 in., \$2.90 to \$3.05; 1-2 in., \$3.20 to \$3.50; 3-4 in., \$4.10 to \$4.20; 1 in., \$5.95 to \$6.15; 1 1-4 in., \$8.30 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

Enameled Ware—An active trade in this line continues. Though prices are

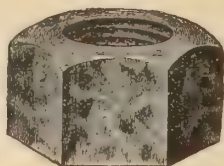
NICHOLSON FILE CO., OPERATING SIX FACTORIES. (Daily Output 120,000.) **FILES AND RASPS**



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THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of
Set and Cap Screws, Special Milled Work, Engine Studs
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A Universal Tool for Farmers and Machinists



It can be used as a flat nose or burner
plyer, wire cutter, holder or splicer, screw driver,
reamer, pipe grip, etc.

Forged from our finest Brescian steel and
guaranteed free from defects.

Send for the Green Book of Hardware Specialties for price and description.

UTICA DROP FORGE & TOOL CO.

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Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

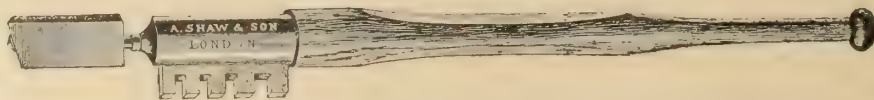
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for them **Superiority over All Others in Quality and Workmanship.**
Glaziers' Diamonds of every description, for all purposes, supplied.

Established 1815

CANADIAN AGENT

GODFREY S. PELTON

338 St. Paul St., - Montreal

A. Shaw & Son

52 Rahere St., E.C., London

firm, there is not much likelihood of an advance. We quote "Standard," 5 1-2 feet rolled rim, first quality, at \$21.60; second quality, \$15.50 to \$16.

METALS.

A fairly active trade continues, though buyers are not disposed to anticipate their wants to any material extent. An expectation of lower prices is probably the cause of this. Pig iron continues to depreciate in value on both United States and English markets. Bar iron shows a lowering tendency in the United States. Tin and copper are at a lower basis of value on the English market. Consequently, though there is no change in quotations, the feeling is decidedly weaker.

Pig Iron—The continued reduction in prices in both the United States and England has weakened the market locally. Prices are not yet altered, however. We quote:

Middlesboro, f.o.b., Toronto	\$19 25
Hamilton, No. 1	\$18 25 to 18 50
" No. 2	17 75 to 18 00
" No. 1	17 00 to 17 25
Midland, No. 1	18 50 to 19 00
" No. 2	18 00 to 18 50
" No. 1 f.o.b. Midland	17 00 to 17 25
Radnor, f.o.b. furnaces	30 00
Londonderry, f.o.b. furnaces	17 50 to 18 00

Bar Iron—Competition for business continues keen. Prices are somewhat weaker. We quote \$1.75 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet by special agreement according to length and size.

Steel—Prices are steady, with an excellent trade doing. Quotations are as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10 to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—Prices are somewhat easier, the range now being from 29 to 30c. An active business is doing.

Galvanized Sheets—There is a good demand at unchanged prices. Quotations are as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tinplates—Considerable business has been done. Stocks are light. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—A fair demand is reported. A large quantity is being discharged at Montreal for delivery throughout Ontario. Prices are steady. We quote as below: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Copper—A fair trade is reported in ingot, also an excellent movement in sheet copper. Prices are easy, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

Brass—There is a fair trade, with the discount steady at 15 per cent.

Lead—There is a good demand at unchanged prices. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—Stocks are light. Buying is active at 5 3-4 to 6c per lb.

Solder—There is a fair trade. Prices are 1-2c lower. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Antimony—7 1-2 to 8c per lb.

Old Material—There is no change. We quote: Heavy copper and wire, 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 9 1-4c per lb.; heavy yellow brass, 8 to 9c per lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.50 per cwt; scrap zinc, 3c per lb; iron, No. 1 wrought, \$10; No. 2 wrought, \$3; machinery cast scrap, \$13; stoveplate, \$10; malleable and steel, \$4; old rubbers, 5c per lb; country mixed rags, 65c per 100 lbs.

COAL.

Considerable activity is being experienced and prices are firm. We quote: Anthracite, \$5.25; bituminous for steam purposes, \$2 to \$4, according to quality, f. o. b. Buffalo and bridges.

PETROLEUM.

A decline of 2 1-2c is noted this week, as a consequence of the tariff changes. We quote: Canadian water white, 17 1-2c American prime white, 16 1-2c; American water white, 19c, ex-warehouse.

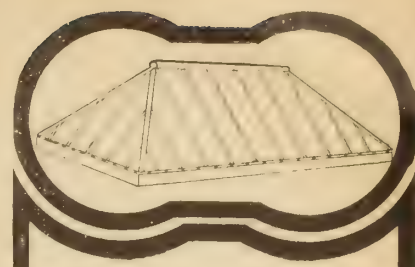
BUSINESS CONDITIONS IN BRITISH COLUMBIA.

Special Correspondence of **HARDWARE AND METAL**.

Vancouver, B. C., June 11, 1904.

A QUESTION of some interest to wholesale merchants and importers on this coast is that of the difference in the freight tariff from eastern Canadian "terminal" points to this coast, and from eastern United States points here. By the published tariffs of the Trans-Continental Freight Bureau, there is a difference of 10 to 15 per cent. in favor of importations from United States points. For instance on picks, shovels, and similar tools, the rate quoted from, say Toronto, or St. Catharines, or other eastern Canadian manufacturing centres, is \$1.95 per hundred lbs. The rate for the same goods from New York or other eastern United States points to Vancouver is \$1.75. But an arbitrary of 5c per hundred lbs. is charged, making this rate \$1.80. The rate to Seattle, Portland, or even San Francisco, several hundred miles down the coast from Vancouver, is the \$1.75 without the 5c arbitrary. In other words, even from eastern United States points there is a 5c handicap placed on Canadian importers.

But that would not be so bad if the railway companies did not charge 15c per hundred more on Canadian goods shipped west than even the lowest rate on United States manufactures. When this 15c handicap is added to the other consideration, that goods are carried further by several hundred miles, the position of the merchants here in trying



Metallic Skylights

The acme of Skylight perfection!

We make them from hollow bars of Copper or Galvanized Steel—in styles and sizes to suit all kinds of roofs.

They are very strong, and unaffected by cold or heat, as there is neither contraction nor expansion—and, if glazed with our fire-proof wired glass, they are absolutely fire-proof.

METALLIC ROOFING CO., Limited,
Wholesale Manufacturers,
TORONTO, CANADA.

for northern trade is easily seen. The matter is to be brought to the attention of the Canadian Manufacturers' Association, as the existing tariffs are virtually putting a premium on the importation of goods from the United States.

* * *

Discussing this question with the representative of Hardware and Metal, one of the best posted hardwaremen in Vancouver said:

"We had recently an order to place for miners' picks. I asked a Canadian and an American manufacturer for a quotation. The rates received were close, but the Canadian manufacturer made an allowance of so much per hundred for differential on freight, and that is all that saved the order for him. Of course we give the preference to Canadian makers in every instance where the price is anywhere nearly equal.

"I think that this is a matter which should come before the Canadian Railway Commissioners when they hold a session here. It seems to me that it is one which is very far reaching in its effects. Mind you, it is not only on tools, or hardware generally. This difference of 10 to 15 per cent. exists on nearly all classes of goods. The wholesale grocers are in the very same position, and so are dry goods importers and others."

* * *

The Vancouver Board of Trade at its monthly meeting on Tuesday evening took up the question of the new freight tariff of the C. P. R. to Kootenay points. The Freight Rates Committee of the Board in submitting a report declared that the new tariff was discriminating particularly against the coast cities as distributing points in giving preference to Rossland and Nelson. There was 16 1/2c in favor of these two cities in the rates. The decision of the Board was that the matter should be

taken up with the C. P. R. by the Freight Rates Committee.

Discussing the arguments of the members of the Board of Trade, Mr. B. W. Greer, general freight agent of the C. P. R., said that in reality there was no discrimination against coast cities in the new tariff. The rates from Vancouver to the Kootenays are the same under the new as under the old tariff. The only difference is that certain Kootenay points, in out-of-the-way places, have been removed from the list of "common points," and must therefore pay a local rate from such common points as Rossland and Nelson, in addition to the rate from Vancouver. It was found necessary to curtail the number of common points on account of the greater cost of transportation to such of them as were off the main branches.

With respect to the statement made at the Board of Trade, that a Rossland merchant might import direct from San Francisco cheaper than by importing via Vancouver, and through the intermediary of Vancouver houses, Mr. Greer said that was exactly the condition which had existed under the old tariff. His company had nothing to do with such through quotations, as they were made by the Pacific Coast S.S. Co. to the San Francisco shippers, and they were made with regard to the competition of all rail routes from San Francisco.

The Municipality of North Vancouver, a rural district across Burrard Inlet from Vancouver City, is asking its rate-payers to vote on a \$50,000 loan by-law to put in a waterworks system in the town which is springing up in its centre. The water supply can be most conveniently obtained from Lynn Creek, which runs through the municipality, and will afford ample supply for a large city of the finest water obtainable, being a mountain stream.

The rural Municipality of Chilliwack, up the Fraser River from New Westminster, is also considering the submission of a by-law authorizing the establishment of electric light plant and empowering the company which will undertake it to build electric tramways in the municipality. This municipality is also one in which a town is growing up in the centre. The Town of Chilliwack is a very thriving farming centre, and is now supporting numerous prosperous business houses. The country round it is extremely fertile and prosperous settlers till the soil. A waterworks system is to be put in very soon according to recent moves in that direction.

The vicissitudes of trading in the north are never more emphasized than in the early Spring, when navigation is opening on the Yukon River. Two scows loaded with merchandise valued at \$15,000 were wrecked on the Yukon on June 2, through striking rocks in the whirling current of the river. The custom of many smaller traders is to buy or build a scow at the head of navigation and run it down to Dawson, making the dangerous trip without the cost of paying freight on the river steamers, which is much greater than the cost of the scow. Down at Dawson there are scores of old scows which have not even been broken up for fuel, lying on the

banks of the river, having served the purpose for which they were built and being now abandoned as worthless.

The British Columbia Riblet Co., of Nelson, B. C., makers and installers of wire rope tramways for mines, have under contract the putting in of a tramway three miles in length for the Britannia mine, on Howe Sound. The company which now owns the mine has built a wharf at the waterfront, and is preparing to operate the mine and ship ore. As soon as the tramway is in, other facilities for shipping ore will be erected at the wharf, bunkers from which barges can be readily loaded being now in course of construction. At the present it is not the intention of the company to build a smelter, though that will come in time.

Ex-Premier James Dunsmuir may tender on the Canadian-Mexican steamship service on the Pacific Coast. Mr. Geo. L. Courtney, general traffic manager of the E. & N. Railway, of which Mr. Dunsmuir is practically the sole owner, has gone to Mexico on a prospecting tour, to see what the conditions are under which a line would have to be operated. On his report to his principal will largely depend the decision Mr. Dunsmuir makes.

The firm of R. Dunsmuir & Sons, of which Mr. Dunsmuir is the head, ships, or used to ship, large quantities of coal to San Francisco. In fact that was their principal business. But the coming of fuel oil into the steamship business, and the opening of the large oil fields in California, have caused the coal export trade to fall off very materially. So much so, indeed, that of the steamers owned by the company but one is now engaged in the carrying trade between the mines and San Francisco. The company also finds it cheaper to charter Norwegian sailing vessels to carry coal to distant ports, or even to California, in preference to using steamers. Therefore Mr. Dunsmuir, who is the virtual owner of the steamers, will be in position to put on a line to Mexico very conveniently.

That there is something doing in a quiet way in coast mining is indicated by a recent shipment from the smelter at Ladysmith, near Nanaimo, on Vancouver Island. The steamer Selkirk recently took out a cargo of copper matte from the smelter to the Tacoma refinery valued at \$21,637. These shipments are regular, for the smelter is constantly employed, and the smelter at Crofton, also on Vancouver Island, and not very far from Ladysmith, is also busy all the time. None but coast ores are treated at these two smelters.

The Victoria Machinery Co., of Victoria, are just completing a new marine railway alongside their shops. The new plant is capable of handling vessels of large tonnage, and will be quite an addition to the equipment of Victoria for marine engineering and repairs.

One of the biggest improvements on the Burrard Inlet waterfront in Vancouver, is the new wharf being built for three firms, the New England Fish Co., the Vancouver Cold Storage Co., Limited, and Brown & Howey, feed and

flour merchants. The wharf is in the form of a pier extending out over 400 feet. The outer end is 150 feet square and is occupied by a large warehouse, nearly the full size of the wharf and two storeys high. It is for the New England Fish Co. Brown & Howey have a length of 150 feet with width of 90 feet, and next the land side is the portion assigned to the Vancouver Cold Storage Co. The C. P. R. Co. owns the wharf and the waterfrontage on which it is built. The various firms leasing the premises build their own warehouses, all of which are very large. The whole work is nearly completed.

Another brick making plant has been started at Fernie, in the Crow's Nest District, by Wriglesworth & Bullock, who have leased the plant of the Fernie Mfg. Co. On the coast a fine brick making plant is now being operated by Brownsword & Co., at Anvil Island, Howe Sound, a very few miles from Vancouver.

The lumber delegation which has returned from Ottawa is very much disappointed over the non-success of their mission. The feeling is that there is no chance of a duty being imposed on rough lumber from the United States.

The business men of Vancouver are much worked up over a recent announcement by the Mainland Board of Fire Underwriters, that the rates of insurance would be put up from 15 to 50 per cent., a general revision and scaling up having been decided upon. The recent fires in eastern Canada, particularly that in Toronto, in which the insurance companies were hard hit, has caused a general stiffening of prices.

The increases are as follows: On all frame buildings and contents, 15 per cent.; on all brick buildings, 25 per cent.; stocks in brick buildings, 50 per cent.

It is claimed by the insurance men that the rates have been heretofore too low in proportion on brick buildings and stocks contained therein. The frame buildings have been paying much higher rates.

PITTSBURG METAL MARKET.

From The Iron Trade, Review, June 16, 1904.

THE iron and steel trade continues in an unsettled condition, and the general tendency of the entire market is still towards a lower basis. One merchant furnace, three steel works furnaces and two Bessemer plants, all in Ohio, were added to the list of idle capacity during the week, while one Western Pennsylvania merchant stack and the Corporation steel furnaces at Sharon, Pa., will be on the idle list within the next two or three weeks. Consumers generally are of the opinion that the entire market will be readjusted on a lower basis during the Summer months, and the shutting down of furnaces and steel works will bring about this revision sooner than otherwise would have been the case. Reports are numerous of shading in billets, as low as \$20 Pittsburg having been reported on a 3,000-ton lot, while a conversion arrange-

ment entered into by a Western Pennsylvania steel plant will give the consumer billets close to \$18. With Bessemer iron selling at \$12.85 to \$13 Pittsburgh, the spread to billets on the present basis of \$23 is too great to be maintained. With a revision of billet prices there will no doubt be a readjustment in other finished lines dependent upon the billet schedule. Meetings of the billet, structural and steel bar associations will be held early in July for considering these matters, and there is a bare possibility that the rail association will meet for the purpose of considering next year's prices. Last year the rail prices for 1904 were fixed in the latter part of June, and the Pennsylvania Railroad was the first large buyer in the market. Heavy shading on plates is reported, amounting to \$4 and \$5 a ton by mills outside of the association. Thus far this year the output of the plate mills has been about 50 per cent. of that in the same period last year, and the indications are that for the year it will maintain the same ratio. On structural material and rails the mills are showing a slightly better record; in pipe, while there is not as great an output as in the same period last year, the production exceeds that of the first six months of 1902.

Despite the concessions that are being offered by many of the independent pipe mills on merchant pipe, thus greatly demoralizing the market, some very large contracts were closed during the past week, and the purchase of 9,000 tons of iron skelp by one of the leading mills would indicate that the merchant pipe trade continues very heavy. There is little demand for sheets, either black or galvanized, and 2.15c can be done on 28-gauge black sheets in earload lots. Bars, both iron and steel, continue extremely quiet, while little new business in plates or structural material has been placed. The railroads are not ordering rails for this year's delivery, and the 1904 tonnage now unfilled on the books of the rail makers will not be greatly added to during the last half of the year.

Pig Iron—The pig iron market has been a little more active than for some time, one of the leading concerns having purchased 6,000 tons of charcoal iron for delivery during the year beginning July 1, while an Ohio concern purchased 3,000 tons of Bessemer iron for delivery during the next four months at a price slightly below \$12 at the furnace, and 5,000 tons of basic was sold to a Western Pennsylvania steel casting plant at about \$12 Valley. On No. 2 foundry iron \$12.75 Pittsburgh is the open quotation, although 1,000 tons were sold by a merchant furnace in this district for eastern delivery at \$13 at the furnace. High grade forge iron is offered at \$12.50 Pittsburgh, and it is possible that this price could be shaded on a desirable quantity. Southern furnaces are still quoting from \$9 to \$9.25 Birmingham for No. 2, and on forge \$2 could be readily done.

Bar Iron—The protracted bar iron conference at Cambridge Springs and the demands of the manufacturers for a lower card based on \$4.50 for puddling do not indicate an early settlement, while no date has yet been fixed for holding the sheet and tin plate conference, and there will be a general shutting down of the sheet and tin mills on July 1, as the manufacturers and the workers are entirely too far apart in their demands to have these scales arranged before that date. There is little demand for either iron or steel bars, and specifications on running contracts are light. On iron bars there would be little difficulty in doing 1.25c Pittsburgh. We make the following quotations: Bar iron, 1.25c to 1.30c Pittsburgh for local delivery, while for western shipment quotations are based on 1.25c to 1.30c Pittsburgh. Hoops are held at 1.55c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open-hearth, 1.40c; plow beams and cultivator beams, 1.35c net; channels, angles, zees and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 lbs. of a size, not less than 1,000 lbs., 10c advance; less than 1,000 lbs. of a size, 30c advance.

Steel—The billet market is in a very unsettled condition, one sale of 3,000 tons being reported at \$20 Pittsburgh for delivery after July 1, a probable reduction no doubt having been discounted. On conversion arrangements close to \$18 Pittsburgh could no doubt be done. A readjustment of the entire billet schedule is looked for at the coming meeting of the billet manufacturers, in view of the great spread between steel and Bessemer iron. Association prices are as follows: Bessemer and open-hearth billets, 4x4 inches, and slabs up to and including 0.25 carbon, \$23, Pittsburgh, Wheeling, Valley, Johnstown; Ashland, Ky.; Ironton, O., and Lorain, O.; 0.26 and including 0.60 carbon, \$1 advance; and 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 3 7-8 inches and sheets and tin bars are \$1 per ton extra. Bessemer and open-hearth rods are still quoted at \$30 to \$31 Pittsburgh.

Wire and Wire Nails—Shading of \$1 a ton on both wire and nails is reported, and a new list is being expected daily by the trade. There is no change on cut nails. As this is the off season in this line, little new business is being placed. We make the following quotations: Wire nails, earload lots to jobbers, f.o.b. cars Pittsburgh are quoted \$1.90 base; plain wire, earload lots, \$1.80 base; barb wire, earload lots, \$2.20 base; staples, earload lots, \$2.05 keg. Galvanized, 30c extra. Earload lots to retailers are held at 5c advance in all lines, and on less than earload lots a further advance of 10c is charged. Steel and iron cut nails, earload lots, \$1.75, and less than earload lots, \$1.80 f.o.b. Pittsburgh, plus freight to points of destination. Terms, 60 days, less 2 per cent. off in 10 days.

Pipes and Tubes—There has been heavy buying of merchant pipe during the past week, despite the demoralization of the market due to the recent cutting. Demand for line pipe continues heavy, and the mills making the latter are in excellent condition so far as tonnage is concerned.

Coke—While a few concerns are inquiring for coke for second half delivery, there is very little buying thus far. Producers generally are holding out for \$1.45 to \$1.50 for strictly Connellsville furnace coke, although it is probable that the price at the last half will be from \$1.40 to \$1.45. On foundry coke, as low at \$1.75 at the ovens has been done to dealers, and \$1.85 to \$1.95 to consumers. Despite the recent shutting down of ovens in the Connellsville region, the output continues heavy, the production of the week ending Saturday, June 4, amounting to 206,682 tons, while the lower region produced 56,236 tons.

LONDON METAL MARKET.

From The Metal Market Report June 9.

Pig Iron—Scotch warrants, Glasgow, closed at 51s 3d, a decline of 3d in the week. Middlesboro No. 3 foundry at 42s 4 1-2d, a decline of 6d in the last week.

Tin—Spot tin opened firm at £119 2s 6d, futures £118 10s, and after sales of 200 tons of spot and 260 tons of futures closed firm at £119 10s for spot and £118 17s 6d for futures, making price, as compared with a week ago, 12s 6d lower on spot and 10s lower on futures.

Copper—Spot copper opened firm at £56 2s 6d, futures £56, and after sales of 200 tons of spot and 800 tons of futures closed steady at £56 2s 6d on spot and £56 for futures, making a decline in the week of 7s 6d in spot and 10s in futures.

Lead—The market closed at £11 8s 9d, making a reduction of 4s 3d in the week.

Spelter—The market closed at £21 15s, making price as compared with a week ago unchanged.

HAY KNIVES.

This is the season when the hardware store finds a demand for hay knives, and for this reason the advertisement in this issue of the American Axe and Tool Co., Montreal, should be of particular interest to the trade. Hardware merchants who have handled this company's goods do not need to be told that their quality is all right. A postcard inquiry will bring interesting prices.

SITUATION WANTED.

HARDWARE CLERK—(Canadian); three years' experience, wishes a position in retail store in Manitoba or N.W.T.; can furnish references if required. Apply Box 138, **HARDWARE AND METAL**, Toronto. (25)

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

BUSINESS CHANCES.

FOR SALE—Stock of hardware and tinware, clean and well assorted; discount off invoice prices to cash buyer. Box 139, **HARDWARE AND METAL**, Toronto. (25)

HARDWARE business wanted in live city or first-class town of not more than five thousand population, located in good farming community. Apply Box 146, **HARDWARE AND METAL**, Toronto. (25tf)

SITUATIONS VACANT.

A **COMPETENT** man wanted; capable of taking charge of felt mill; must be a good finisher; references required. The Perth Woollen Co., Limited, Perth, Ont. (f)

BLACKSMITH WANTED—One or two years' experience; steady chance at fire. N. Eidts Port Elgin. (f)

BOILERMAKERS WANTED—Steady work to good men. Address R. Whitlaw, Woodstock, Ont. (f)

BLACKSMITH WANTED—Two or three years' experience, or general blacksmith; state experience and wages; apply at once. W. H. Jacob, Athens, Ont. (f)

CLERK for general store wanted; two or three years' experience. Apply Chittick & Somerville, Cargill. (f)

HARNESS MAKER wanted; must be first-class on general work. The Morris Harness & Stable Supply Co., Guelph. (f)

HARDWARE clerk wanted; first-class man only; state age, experience, salary. The Marks, Clavet, Dobie Co., Port Arthur, Ont. (25)

TINSMITH—First-class man; at once; good on furnace work; to take charge of an established trade. Box 144, **HARDWARE AND METAL**, Toronto. (28)

TINSMITH WANTED—One that understands furnace work and tinsmithing. Apply at Christie Bros. Co., Owen Sound, Ont. (f)

TINSMITH WANTED—Good man; state wages. Apply to Moore Bros., Bradford, Ont. (f)

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

HARDWARE CONDITIONS IN MANITOBA.

Office of **HARDWARE AND METAL**
Room 308 McIntyre Block,
Winnipeg, June 15, 1904.

FOR the past week rain has fallen almost incessantly, and has been general throughout the Northwest. All vegetation is showing a decided improvement in its growth. The grain in some places is over 12 inches in height, and the lowest 2 inches, where the seeding was held back so long on account of the water. Trade continues very bright and the prospects are encouraging.

The market practically holds the price list the same, with little or no change of any note. We quote:

Barbed wire, 100 lb.	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91

Annealed wires (uncoiled) 10c. less.

Horsenails, 40 per cent. discount.

Horseshoes, iron, No. 0 to No. 1.....	\$4 75
No. 2 and larger.....	4 45
Snow shoes, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 45
No. 2 and larger.....	4 20

Cut Nails—	Wire Nails—
2d 1 in.....\$4 10	1 in.....4 15
3d Fin. 1½ in. 4 10	1½ in.....4 10
3d 1½ in.....3 75	1½ ".....3 70
4d 1½ in.....3 50	1½ ".....3 50
5d 1½ in.....3 50	1½ ".....3 50
6d 2 in.....3 40	2 ".....3 40
8d 2½ in.....3 25	2½ ".....3 25
10d 3 in.....3 20	3 ".....3 20
20d 4 in.....3 15	3½ ".....3 15
30d 4½ in.....3 10	4 ".....3 10
40d 5 in.....3 10	4½ ".....3 10
50d 5½ in.....3 10	5 ".....3 10
60d 6 in.....3 10	5½ ".....3 10
	6 ".....3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00

Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10

Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American.....	4 25
28 gauge.....	4 50
30 gauge or 10½ oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28.....	4 75
Extra sheets, 36 in. wide, an advance of 25 p.c. per 100 lb.	

Genuine Russian, per lb.....	11
Imitation ".....	07 to 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 50
Tinplate, IC charcoal, 20 x 28, box.....	9 50
" IX.....	11 50
" IXX.....	13 50
ngot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.....	3 00
Canada plate, full polished.....	3 15
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50
Pig lead, 100 lb.....	5 50
Black iron pipe, ¾ inch.....	3 30
" ¾ ".....	3 30
" ¾ ".....	3 40
" ¾ ".....	3 75
Black iron pipe, ¾ inch.....	4 30
" I.....	6 25
" 1½ ".....	8 75
" 1½ ".....	10 50
" 2 ".....	14 50
Rope, sisal, 7-16 and larger, basis.....	11 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrn.....	11 25
Solder.....	20
Axes, chopping.....	\$ 6 75 to 12 00
" double bits.....	12 00 to 18 00
Bluestone.....	5 25
Screws, flat head, iron, bright.....	.85 and 10 p.c.
Round ".....	80 p.c.
Flat " brass.....	.75 and 10 p.c.
Round ".....	.70 and 10 p.c.
Coach.....	70 p.c.
Bolts, carriage, 3-16 and ¼.....	60 p.c.
" 5-16 and ¾.....	.55 and 5 p.c.
" 7-16 and up.....	55 p.c.
Bolts, machine, ¾ and under.....	.50 and 5 p.c.
" 7-16 and over.....	.55 and 5 p.c.
Bolts, tire.....	.60 and 5 p.c.
Bolt ends.....	.55 and 5 p.c.
Sleigh shoe bolts.....	70 p.c.
Machine screws.....	70 p.c.
Plough bolts.....	.55 and 5 p.c.
Square nuts, case lots.....	3c. discount.
" small lots.....	2½c.
Hex " case lots.....	3c.
" smaller lots.....	2½c.
Rivets, iron.....	.50 and 10 p.c.
Copper, No. 8.....	32
No. 12.....	36
Coil chain, 3-16 inch.....	9½
" ¼ inch.....	7½
" 5-16 inch.....	5½
" ¾ inch.....	5½
" 7-16 inch.....	4½
" ¾ inch.....	4½
" ¾ and ¾ inch.....	4
Spades and shovels.....	.40 and 5 p.c.
Harvest tools.....	60 p.c.
Axe handles, turned, s. g. hickory, doz..	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60
Files common.....	70 and 10 p.c.
Diamond.....	60 p.c.
Building paper:	
Anchor, plain.....	65c.
" tarred.....	70c.
Pure fibre, plain.....	67½c.
" tarred.....	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
American R.F.....	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.
Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00
Shot, Ordinary, per 100 lb.....	6 00
Chilled.....	6 50
Powder, F.F., keg.....	4 75
F.F.G.....	5 00

Tinware, pressed, retinned.	70 and 10 p.c.
" " plain.....	75 and 2½ p.c.
" " pieced.....	
Japanned ware.....	37½ p.c.
Enamelled ware, white.....	45 p.c.
" Famous.....	50 and 10 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American	27¼c.
Prime white American.....	25¼c.
Water white Canadian.....	25¼c.
Prime white Canadian.....	24¼c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap.....	5
Copper (heavy).....	8¼c. per lb.
Yellow brass (heavy).....	7¼c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead.....	2c. to 2½c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead.....	\$6 00 to \$6 50
Putty in bladder, 2½ lb., in keg of 100 lbs.	0 02½
Turpentine, pure in barrels.....	\$ 0 97
Less than barrel lots.....	1 02
Linseed oil, raw.....	0 52
Boiled	0 55

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine....	0 29
" " extra engine.....	0 27
" " dynamo	0 35
" " black	0 22
" " cylinder.....	0 50 to 0 75
(as to quality)	

Harness oil.....	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure.....	1 00½
2nd pressure.....	1 09½

TRAFFIC ON THE "SOO" CANALS.

THE statistical report of the traffic of the Sault Ste. Marie Canals shows a great falling off from the traffic up to this time last year, the difference being more than 6,000,000 tons. The decline in tonnage is due to the strike in American ports to a certain extent and also to the fact that navigation opened about a month later than last year.

The total freight tonnage for the period to June 1 was 449,888. The tonnage for April last year was 1,651,839 and the tonnage for May reached 5,188,071, making a total up to June 1 of 6,839,856, or 6,389,968 more than this year up to June 1.

The Canadian canal traffic shows up heavier than that of the American side by over 40,000 tons, a condition seldom known. Of wheat, 4,462,613 bushels were carried through Canadian, and only 664,178 bushels through the U. S. canals. Of general freight, 201,211 tons went via Canadian, and 248,677 tons via the American canals. This is due to the fact that the Canadian boats were not affected by the tie-up. Very little ore of any kind has gone down the lakes so far.

IMPERIAL STANDARD SCALES

Manufactured by

The Burrow, Stewart & Milne Company, Limited
HAMILTON, CANADA.

HAY, COAL AND CATTLE SCALES

with patent cut-off lever and all the latest improvements.



Can be supplied with either single or double beam.

Size of Platform 14 feet by 8 feet 3 inches.

No. 480—Capacity 3 Tons	No. 482—Capacity 5 Tons	No. 484—Capacity 8 Tons
" 481— " 4 "	" 483— " 6 "	" 485— " 10 "
	" 486— " 15 "	

This scale can be supplied as a cattle scale with guards.

Manitoba Depot, 117 Bannatyne Street East,
MERRICK, ANDERSON & CO., - WINNIPEG

Stephens

BARN & ROOF PAINT.

MADE WITH
**MANITOBA
PURE LINSEED
OIL**

The Greatest Seller in the Paint Line

Write us for new prices.

MANUFACTURED BY
G. F. STEPHENS & CO., LIMITED
170, 172, 174, 176 Market Street, - WINNIPEG, CANADA.

PAINT, OIL AND BRUSH TRADES

PAINT AND COLOR IMPORTS.

EXCEPTION has been taken by a leading color man in Montreal to the remarks in last week's Montreal market report to the effect that, "The paint and oil business has been very little affected by Mr. Fielding's budget. Few, if any, changes were expected, and consequently there has not been the same speculation and excitement as in former years." The objection is made that the paint industry is very much affected by imports from the United States, and that therefore the statement just quoted is incorrect.

The objection is scarcely well taken, as the point sought to be brought out by Hardware and Metal was that the tariff changes made do not affect the paint and oil trade. With that statement no fault will be found by this Montreal grinder, for it is the basis of his own complaint. He urges that changes should have been made. This is an entirely different question, but one well worth discussion.

An examination of the customs returns shows that imports of painting materials have been steadily increasing in recent years, particularly from the United States. The following table shows the imports from the United States in recent years:

	Dutiable.	Free.	Total.
1899.....	\$190,674	\$42,724	\$233,398
1900.....	275,586	51,765	317,351
1901.....	387,112	52,773	439,885
1902.....	502,390	60,003	562,393
1903.....	654,199	70,874	725,073

These figures indicate a rapid increase in imports of paints and colors from the United States, which it is only natural should be viewed with disfavor by Canadian manufacturers.

Particular objection is made to the following items from the United States in the year ending June, 1903:

Varnishes, 72,795 gallons.....	\$108,544
Dry colors, 798 tons.....	67,162
Wet colors (in oil or water), 1,037 tons..	134,744
Wet colors, fillers, etc., 220 tons	21,711
Paints ground in varnishes, 21 tons	3,943

Total..... \$336,104

It is urged by many paint men that this increase in United States imports

is due to the offering of American paints and colors on this market at slaughter prices. Fair competition they are prepared to meet, but not "dumping."

Against this unfair class of competition the Government have devised their "dumping" clause, which, if carried out, should meet the objections of the paint men. Whether this clause will prove to be workable is another question, upon which opinions seem to be divided. Numerous business men state that they prefer paying the extra amount to the American manufacturer (trusting to the chance of obtaining a rebate at the end of the year), to paying a surtax to the Government. Time will

show whether the new clause is workable.

Not a Student of Shakespeare.

A certain hardware merchant in a well-known town, to make more room for liquid paints, recently (after the manner of the departmental stores) put his dark-eyed young lady cashier in a balcony in the store, where a good view of the shop could be obtained.

A traveler enters, and the following conversation ensues:

Mr. Crosscutt—"I see you have elevated Miss Allcash. It reminds me of the balcony scene in Romeo and Juliet. You have seen the play?"

Mr. Cuttax—"No. I never saw it, and I can't say I ever heard tell on it."



What Should a Good Paint Be?

One season handling Hollywood brand will convince you that it is what it should be—

**GOOD PAINT TO COVER
GOOD PAINT TO WEAR
GOOD PAINT TO SELL**



What more do you want? Hollywood Paste, Ready-Mixed and Floor Paints wear on the job, not off it.

The Imperial Varnish & Color Co.

LIMITED,

TORONTO, ONTARIO, CANADA.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street.

THE ACKNOWLEDGED
STANDARD**SOLARINE**

High-grade Liquid Metal Polish. White and black forms. Both are unsurpassed. Start it in your town. It brings the business. For prices, etc., address

SOLARINE DEPOT, TORONTO.

Do you use a

**Roller
Awning?**

If not, why not? We make the best roller awning in Canada. We can operate a 60-foot awning on one roller from one end easily and safely. Write or call for particulars. The best is none too good for you.

**WM. BARTLETT & SON**
Tents, Awnings and Flags

16 Adelaide St. West,

TORONTO.

McCaskill, Dougall & Co.**Manufacturers**

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES

MONTREAL.**ABOUT GLUES**

What kinds do you handle? Are you and your customers satisfied? Perhaps we can give you a better article at a fairer figure. Our SCOTCH GLUES will be found of exceptional strength, and equal to many glues for which much higher prices are charged. Let us send samples.

GROVE CHEMICAL CO., LTD., Appley Bridge, Lancashire, Eng.**Nobles & Hoare.**

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works or from the principal Color Dealers in Canada

TRADE



MARK

**The Best
Paint Store**

There is always a store in town known to be the best—best because its goods are best. Ten chances to one that store sells "Island City" paints. You see the moral. Apply it.

Temporary Toronto Premises at 23 Scott Street.

Toronto Orders filled promptly from Montreal and we pay extra freight.

P. D. DODS & CO., Montreal, Toronto, Vancouver**Bath Tub Enamel or Liquid Porcelain**

for enamelling BATH TUBS, THE WOODWORK OR WALLS AND CEILINGS OF BATH ROOMS, OR ANY SURFACE SUBJECTED MORE OR LESS TO THE ACTION OF STEAM OR MOISTURE. Effectually resists hot or cold water. A pint tin is sufficient to enamel an ordinary sized bath tub, giving same three coats.

A TESTED LINE, Fulfills every requirement.

SEND FOR PRICE LIST

STANDARD PAINT & VARNISH CO., Limited
WINDSOR, ONTARIO.

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, June 17, 1904.

BRIGHT Summer weather has had a stimulating effect on the paint and oil trade this week. First-class business is reported by both makers and jobbers. There is a big demand at present for both white lead and linseed oil, probably owing to the remarkable cheapness of these items. Paris green is again in very good demand, and although it is scarcely likely that the turn-over will be equal to former years, business in this article is considered fairly satisfactory. A further improvement is expected when the sorting trade commences. There has been a decline in turpentine, some houses quoting as low as 82 1-2c for single barrels, and others quoting 84c. The decline is attributed to increased supplies. Prices are still very high, as compared with former years, but no further decline of much importance is expected at present. The general opinion among shrewd observers of the market is that the days of cheap turpentine are gone forever. Linseed oil is steady at former prices. We quote:

Ground White Lead—Best brands, Government standard, \$4.50; No. 1 \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100-lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100-lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25-lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

Putty—Bulk, in barrels, \$1.40; in 25-lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

Orange Mineral—Casks, 7c; 100-lb kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4; in 100-lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 84c per gallon; 2 to 4 barrels, 83c per gallon. Another quotation is: Single barrels, 82 1-2c per gallon; 2 to 4 barrels, 81 1-2c per gallon. For smaller quantities than

barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

Linseed Oil—Raw, 1 to 4 barrels, 43c; 5 to 9 barrels, 42c; boiled, 1 to 4 barrels, 46c; 5 to 9 barrels, 45c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—83-4 to 91-4c in wholesale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb drums, 15c; 25-lb drums, 15 1-4c; 1-lb packages, 16c; 1-2-lb packages, 18c; 1-lb tins, 17c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb drums, 15c per lb; 25 lb drums, 15 1-2c; 1-lb paper boxes, 16c; 1-lb tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, June 17, 1904.

BUSINESS is well up to the average for June. A good sorting trade continues in prepared paints, varnishes, white lead and sundries. Linseed oil has advanced 1 to 2c, and is selling

well at the new prices. Turpentine has been reduced 1 1-2c by some dealers, the demand for it being fairly good. Paris green is steady in price, and is in good request in all parts of the country. In other lines there is no change. Paint and color manufacturers are studying the new tariff regulations with much interest. It is believed that the "dumping" clause will affect much lines of dry colors which are being sent to this market from the United States. It will take some time, however, before the trade will feel any effect from the new duties.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb and upwards; 1-2c per lb extra will be charged for 12 1-2-lb packages; genuine dry white lead, in casks, \$4.50.

Red Lead—Genuine in casks of 560 lb, \$4.25; ditto, in kegs of 100 lb, \$4.50; No. 1, in casks of 560 lb, \$3.75 to \$4; ditto, in kegs of 100 lb, \$4.25.

White Zinc—Genuine, French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5-gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon; No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 43c; boiled, 46c; 5 to 9 bbls. raw, 42c; boiled, 41c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points. Another quota-



Send us a post card
and let us tell you
all about them.

TRADE WINNERS.

That's what you'll find

ANCHOR and ENGLISH LIQUID PAINTS

They not only win trade, but they hold it.

They are the only ready-mixed paints made in Canada that contain **Brandram's B. B. Genuine White Lead**—standard of the world.

HENDERSON & POTTS, Limited, Halifax.
HENDERSON & POTTS CO., Limited, Montreal.

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

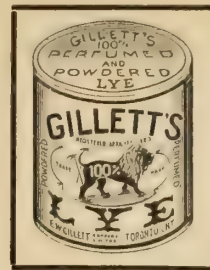
White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.



GILLETT'S LYE

—IS GOOD FOR—

Cleaning and Sweetening
**Milk Cans, Pans and
Cheese Utensils**

Nothing better can be used.

Sell GILLETT'S Lye for Cleaning and
Sweetening MILK CANS, etc.

E. W. GILLETT COMPANY LIMITED
TORONTO

COVERS THE HOUSE

It doesn't matter whether it's the chimney pots
or the mantel piece in the drawing-room

STERLING PAINTS

Do the work in a bright and thorough manner.

DEFY THE SUN

ARE WATERPROOF

DO NOT LOSE LUSTRE

WON'T CRACK

Put up in handy tins, beginning with half-pints.

Every dealer should handle "STERLING" Paints—The paint that
wears well.

Canadian Oil Company, Limited

HEAD OFFICE

Scott and Front Streets, Toronto

T. H. HAMILTON, General Manager



PAINTS FOR VESSELS



Boat Owners and Boat Builders should proceed without delay to the nearest Hardware or Paint dealer and ask for

THE CANADA PAINT COMPANY'S

Boat and Yacht specialties, Aird - Felch Boat Composition, Munro's Canadian Copper Paint, Amberite Pale Copal Spar Varnish, are all made by the

CANADA PAINT COMPANY

and sold in cans only, never in bulk. Marine Paints and Varnish for every description of craft, from a canoe to a battleship, are manufactured by this Company. Yachtsmen will be satisfied if they see the following name upon each package, viz —

**THE
CANADA
PAINT
COMPANY
LTD**

tion is: Raw, 1 to 4 bbls, 43c; boiled, 46c; 5 to 9 bbls, 42c; boiled, 45c; 10 barrels and over open, ex-Toronto, 2 per cent. off 30 days.

Turpentine—Single bbls, 81c; 2 to 4 bbls, 80c; 5 bbls and over, f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls, 83c; 2 to 4 bbls, 82c; 5 bbls and over, open ex-Toronto with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5-gallon packages, 50c and 10-gallon packages 80c will be charged.

Glues—Broken sheet, in 200-lb bbls, 3 to 8 1-2c per lb; cabinet glue, in 5bbls, 11 1-2 to 12c; emery glue, in bbls, 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100-lb kegs, \$1.85; bulk in barrels, \$1.45; bulk, less than barrels and up to 100-lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per bbl.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per pound, and 8 1-2 to 9c for single tins.

English Paris Green — Petroleum bbls, 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100-lb drums, 14c; 1-lb packages, 15c; 1-lb tins, 16c; 1-2-lb tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls, 13 3-4c; arsenic kegs, 14c; 50 and 100-lb drums, 14 1-2c; 1-2-lb tins, 18 1-2c.

St. John, N.B.

Because of the change in duty, prices in both American and Canadian oil have dropped 2 1-2c. There is quite a strong competition in this market between American and Canadian companies, which will, without doubt, greatly help to keep the prices down. This movement on the part of the Government, as we suggested, is very popular, as it has been the general opinion for years that a step of this kind should be taken. There is at this season but a fair sale. Linseed oils are still selling at the very low figures quoted earlier. The demand has somewhat fallen off. Turpentine, which for so long was held firm at high prices, continues to weaken, and is quoted a little lower. Lubricating oils have a fair demand; there is no change in price.

Window Glass

MONTREAL.

In another part of this issue will be found extended reference to the increas-

ed preference on British glass, and its effect on the Canadian market. There is an active trade passing at former prices, which were: First break, 50 feet, \$1.70; second break, \$1.80 for 50 feet. First break, 100 feet, \$3.25; second break, \$3.45; third break, \$3.95; fourth break, \$4.20.

TORONTO.

The great topic of discussion in the trade this week is the tariff changes. The majority of the houses here are interested in Belgian glass, and they are so alarmed by the increased preference on British glass that a delegation went to Ottawa to try to persuade the Government to reconsider the clause in the new tariff giving greater preference to Belgian glass. Prices locally are unchanged, and a steady trade is doing. We quote nominally as follows: Star, first break at \$3.30 per 100 feet and Double Diamond, first break, at \$5.10. Discount, 15 and 20 per cent.

Gold Pink.

GOLD PINK is the name sometimes applied to a specially-prepared vehicle for gold-leaf, says A. H. Hooker, in Co-operation and Expansion. It is prepared by diluting copal varnish with six times its volume of warm turps. The resulting mixture is clarified by the addition of 30 per cent. of slaked lime, which is allowed to subside, leaving a clear solution above. The oil gold-Japan used by gilders is made by exposing linseed oil to the air till it has gone fatty, and then grinding it with yellow ochre and a little gold size.

Telephone Lines in Nova Scotia.

Mr. W. R. Holloway, United States Consul-General, makes an interesting report on telephony in Nova Scotia:

"A new line of long-distance telephone, with 292 miles of copper wire, has been opened between Halifax and Sydney, the offices being equipped with the latest improvements. The report of the general manager of the Nova Scotia Telephone Company shows 790 miles of poles for their long-distance lines and 2,246 miles of copper wire. The total mileage of telephone wires in the province is 7,136, and of posts is 791.

"The number of telephones in the province is 3,260, of which 1,801 are in the City of Halifax. Last year the company transmitted 14,000,000 messages. The long-distance lines unite Truro, Amherst, Bridgewater, New Glasgow and Windsor-Sydney.

THIS REPRESENTS OUR
NEW PATTERN.

Mrs. Potts' SAD IRON

GREAT SELLER.

THE H. R. IVES CO., Limited, MONTREAL.



PENNY WISE

GRANT-03-

The only real value of money lies in making use of it.

The money that lies there in your safe from day to day doesn't do you any good until you commence to use it.

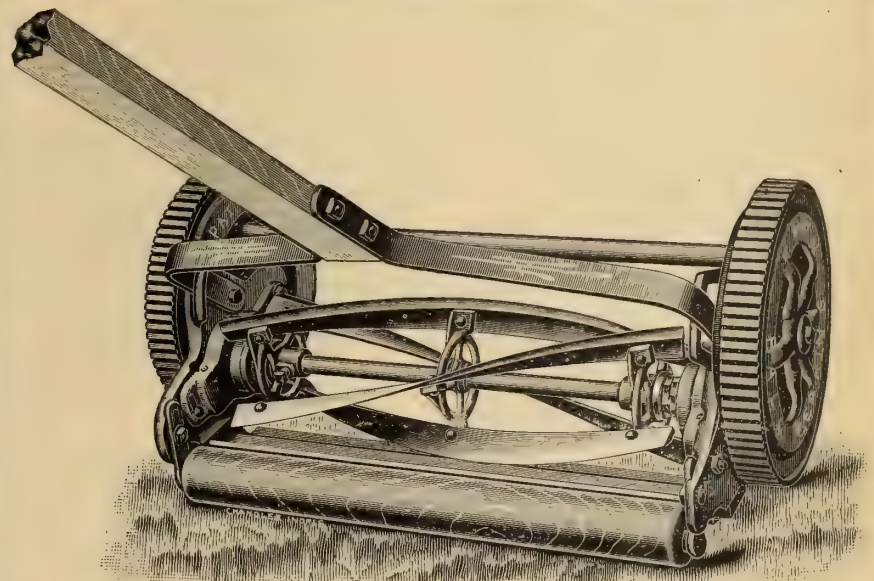
Then its value to you depends on how you use it.

Now, if you would only invest some of it in advertising space in **HARDWARE AND METAL**, and then use the space right you'd have a valuable assistant, working to increase your trade with hardwaremen and to make yourself and your goods better known among them.

Some folks would sooner save (?) the money—but they are "penny wise and pound foolish."

But you're not.

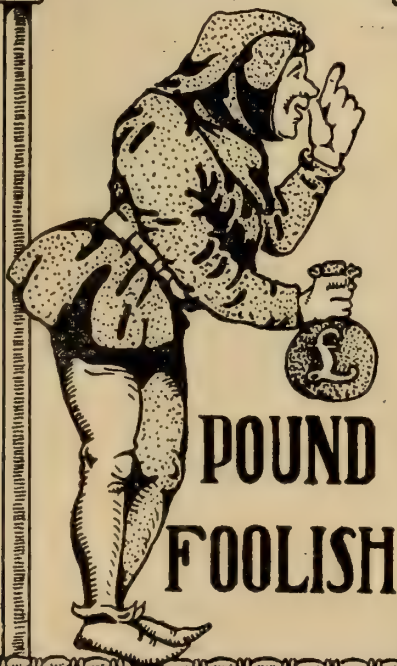
Are you?



The F. & N. Ball-Bearing Lawn Mower.

The only Ball-Bearing Lawn Mower that has proved a success. A feature of the F. & N. Mower is a very simple device to take up wear in the bearings. This device is found in no other mower. It has other improvements too numerous to mention here. Our illustrated circular will tell you all about it. Write for it and get prices that will interest you.

John Bowman Hardware & Coal Co.
LONDON, CANADA.



POUND FOOLISH

STOVES AND TINWARE.

NOTES OF THE STOVE TRADE.

By Argus.

STOVE retailers throughout the Dominion should start early this year to make their plans for the coming Fall and Winter campaign. During the next month or so most of the foundries will have their new catalogues ready for distribution, and at the same time will have their new designs ready for the trade. The sooner the retailer takes up the question, settles to his own satisfaction which line or lines he shall handle, and the sooner he has the goods in his store ready for the inspection of his customers, the better for his business.

In reaching a decision as to what lines he should handle, the retailer should take all the conditions into consideration. It has been found by many retailers that to secure a connection with one of the strong, reliable firms and to year in and year out push the one line with vim and vigor, is the wisest and most profitable policy. It has been the general experience of such retailers that any of the best manufacturers, when they get a retailer to take their agency exclusively, do everything in their power to make the business of the agent as remunerative as possible. Some of the manufacturers take especial pride in their reputation for generous treatment of their agents.

Other retailers have followed a system almost the reverse. They secure each year the catalogues of all the different manufacturers, read carefully advertising done by them, to the end of deciding which lines they will stock for the next season. They may carry a line of coal heaters from one firm, of ranges from a second, of furnaces from a third, of hotel ranges from a fourth, and of box stoves from a fifth. They are guided, in making their annual choice, solely by the opinions they form after hearing all they can about the various lines.

In any case, the retailers should make a thorough study of the stoves offered by the various foundries. New designs are put out every season. Possibly a foundry may have just what a retailer may want, but the latter may not hear of it unless he is on the alert for all information he can secure.

The new customs regulations will undoubtedly help in some degree the Canadian foundrymen. The great complaint of the stove founders of the Dominion has been the need of protection against the "dumping" of United States goods on the western market. The special duty on "slaughtered"

goods will interfere with importing in a more or less material way, and may have the effect of so enhancing the cost laid down in Canada that the competition of United States makers will not be the factor in the trade it now is.

The Record Foundry & Machine Co., Montreal, Moncton and Toronto, have opened a new warehouse at 54 Colborne street, Toronto, which is in every sense larger and more satisfactory than their old premises at 22 Church street. They now have three large floors and a basement, the ground floor giving them a particularly noticeable appearance from the street. W. W. Ingram is in charge of the Toronto office. R. R. Kinread, who formerly covered Western Ontario for this firm, has been transferred to Manitoba, where he will represent his firm at the Manitoba Exhibition, and later open up an office in that city. Frank Peters is to take charge of Mr. Kinread's former territory, Western Ontario.

Rusting of Stove Pipes.

THE ruinous rusting of stove pipes is a matter that if often forcibly brought to the attention of users of anthracite coal stoves. Pipes which have been in use for two or three years will sometimes become so eaten by rust that little metallic iron is left, and the pipe will crush in the hand. This destruction is more rapid and complete than with the ordinary weather-rusting of sheet iron.

This result is generally attributed to the sulphur in the coal. There is not much doubt that the destruction of the mortar in chimney tops is due to the acids of sulphur; but recent experiments have shown that sulphur has little to do with the injury to pipes. The true cause has been found to be the presence of ammonia compounds produced during combustion. Both the chloride and the sulphate of ammonia are formed in the pipe, and mix with the ashes and soot. During the dry, cold weather, these compounds remain harmless, but as the warm weather comes on they readily absorb the moisture. The chemical action is thus hastened between the iron and the water in the air; by the presence of these two compounds, since they attract the moisture of the air and bring it into close contact with the iron. Thus the iron rusts.

This is the time that users are beginning to store their stove pipes, and perhaps the hardware dealer may do

something to help his customers keep their stove pipe in good condition by telling them how to remove these compounds of ammonia from their pipes.

There are two ways of doing this; first, and perhaps the handiest, by immersing and thoroughly soaking the separated sections for several hours in water—running water, if possible; and second, by roasting the pipes over the fire to a red heat. Both of these methods have been successfully tried.

Standard Tinware Moving.

The Standard Tinware Co., of Montreal, are moving to larger premises at 58 Wellington street. For some years this firm have manufactured only tin cans and similar goods for the canning industries, but they now propose to branch out into general lines of tinware. The move is being made with this object in view.

Order a stock of

"Windmill Best"

Galvanized Sheets

Cut Prices

Quality Right

Made by

John Summers & Sons, Ltd.

STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.

Canadian Agent,

F. HANKIN, - Montreal

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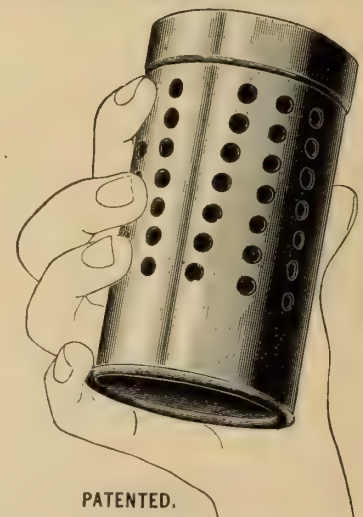
for news of the Oil, Paint, Soap, Varnish, Chemical and Drysaltery Trades.

Subscription, \$2.00 per year from date.
Sample for 10 cents.

SCOTT, GREENWOOD & CO.

19 LUDGATE HILL

LONDON, ENG.



No. 2 Tin Soap Shaker.

Manufactured by

E. T. Wright & Co., Hamilton, Canada.

COVERT MFG. CO.
West Troy, N.Y.

Steel Carriage and Wagon Jacks

Harness Snaps, Chain, Rope and Web Goods, etc.

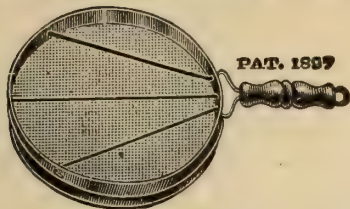
SOLD BY ALL LEADING JOBBERS.



PRIEST'S CLIPPERS

Largest Variety
Toilet, Hand, Electric Power
ARE THE BEST.
Highest Quality Grooming and
Sheep-Shearing Machines.
WE MAKE THEM.
SEND FOR CATALOGUE TO
American Shearer Mfg. Co., Nashua, N.H., USA

Wiebusch & Hilger, Limited, special New York
representatives, 9-15 Murray Street.

The FAIRGRIEVE GAS TOASTER
Retail at 25c. The only Toaster guaranteed to toast on
gas, gasoline or blue flame oil stoves without taste or smell.
Write for prices.

THE FAIRGRIEVE MAN'FG. CO.,
295 COLLEGE ST., TORONTO.
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\$2 FOR THIS SMALL SUM THE **\$2**
MANUFACTURER and SUPPLY MERCHANT
may keep posted on new openings
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The CANADIAN CONTRACT RECORD
reports weekly all projected building and other
construction works throughout Canada as well
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Send your name and address with \$2 for
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Have you
tried it?
Tried what?
**SELLING
MANTELS.**



This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

THE ADAMS STOVE PIPE REGISTER.



Design Patented
June 29, 1897.

Design Patented
August 31, 1897.

Made by

**The Adams
Company**

Dubuque,
Iowa, U.S.A.



The Arctic Ice Chest



Made in three sizes—

No. 20..... 19 x 13¼ x 13¼
No. 30..... 23 x 16 x 16
No. 40..... 27 x 19¼ x 19¼

Refrigerator Made on Scientific Principles.

Handy and Compact.

Lined with Galvanized Iron.

Japanned in Oak and Ornamented.

Silver-Plated Tap.

Suitable for Yachts, Picnic Parties, Summer Residences, etc.

**A Boon in the Sick Room. Keeps the food for the
invalid Fresh and Sweet at all times.**

PRICES ON APPLICATION TO

The THOS. DAVIDSON MFG. CO. Limited. . . . MONTREAL.

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THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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Building Activity in Toronto.

MANY conditions have combined to make the present Summer one of the busiest, so far as building operations are concerned, that the city has ever experienced. An indication of this is given in our report on building operations this week, the total amount of which, as may be seen, aggregates over \$500,000.

Toronto has, during recent years, been growing in a remarkable manner, both commercially and industrially. While there has not been any large manufacturing plants (like the Deering or Westinghouse works in Hamilton) established by outside capitalists, there has been a widespread expansion of the factories, foundries and machine shops in the city. So many of these concerns have within the last five years or so doubled their capacity that the number of men employed in the

industrial establishments of the city is probably nearly twice that of a few years ago.

Commercially, the growth of Toronto has been equally marked. Existing wholesale concerns have found it advisable to steadily increase their staffs, while many new houses have been opened, a tendency on the part of United States concerns to establish agencies in Toronto being a feature of this development.

The growth of these manufactories and wholesale houses has in large measure been due to the development and prosperity of the country in general. As a consequence of their growth and of the higher level of wages paid there has been a steady growth of population in the city, a growth of such substantial and permanent character that for at least two years there has been a distinct shortage of both retail stores and of residences. At the same time, warehouse and factory accommodation has been far from satisfactory.

Early in the Spring an active building season was expected. Therefore, when in a night millions of dollars of warehouse property in the heart of the city was destroyed those interested in building operations recognized at once that a season of exceptional activity was inevitable unless labor troubles or excessive prices for materials should interfere.

The extent of the issue of building permits this week is a proof of the correctness of this viewpoint. A feature of the situation is the proportion of permits taken out for residences, over three-quarters of the full amount being for that class of building.

One consequence of this will be an activity in the Toronto plumbing trades during the Fall months such as is not often experienced. Some of the shrewdest master plumbers are not taking any more contracts for work to be done in September, October and November than are absolutely necessary, believing that the activity in their line will be such in those months that higher prices for contract work will be inevitable.

In any case, a busy season at good prices is assured for all interested in the building trades in Toronto.

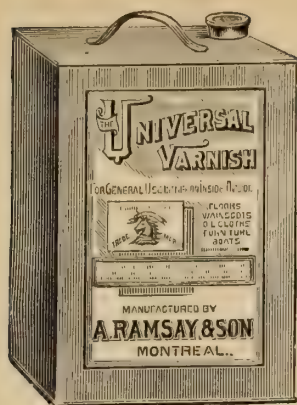
Oxidizing Zinc.

THE increasing use of zinc for many purposes makes it desirable to produce various finishes on it. A good black finish, says the Metal Industry, may be prepared in the following manner: The zinc is cleaned from grease or oil and plunged into a bath composed of water, 32 parts; butter of antimony, 1 part, and chloride of copper, 2 parts. After the desired effect has been produced the zinc is washed and dried, when it will be found that a permanent black deposit has been formed. The zinc may now be given a thin coat of white lacquer, if a permanent character to the entire work is desired. The butter of antimony (chloride of antimony) may be used alone, if desired, but the deposit formed is not quite so permanent as that produced by the copper and antimony together. Good effects may be produced by first giving the zinc an ornamental design with some suitable varnish or ink and then oxidizing the portions uncovered. The varnish may then be removed by alcohol, benzine or other solvent, and the whole covered with lacquer. The design will now stand out in bold relief.

Big Pipe Contract.

A LARGE order for steel tubing has been given to the National Tube Co., Pittsburg, Pa., says the Post of that city. It involves the making of 110 miles of 16-inch steel pipe, for the purpose of tapping the natural gas fields of Kansas, and feeding this fuel to Kansas City, Mo., while a branch line of 12-inch pipe is to lead off the main supply to the City of Joplin, Mo., a distance of 80 miles, making in all 200 miles of steel piping. The new gas fields of Kansas have been well prospected by a syndicate of capitalists, including Pittsburg men, well known in oil and gas interests. While the company that is to operate this plant has not been incorporated, the syndicate out of which the corporation is to be formed is going right ahead and will be ready to supply this fuel to the domestic consumers of Kansas City, Mo., next Winter, and to the smelters of Poplin, Mo., a little later.

The amount of investment is about \$1,500,000, this amount representing the share in the work that the pipe mills will have. While it is not so stated,



TWO WINNERS

These two lines are for your varnish trade, made for varnish business; to please the public and the user generally.

The Universal is a regular "King" among varnishes with an interesting rebate voucher attached to each can, paid by us on presentation. Ask for our booklet.

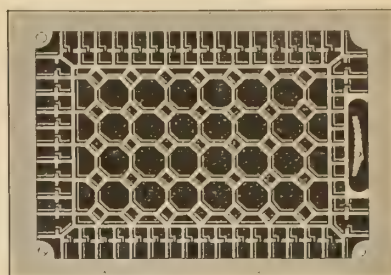
The Kaurine is consort to the Universal. It's a happy winner. Specially recommended for interior work.

All in handsome cans, fully guaranteed and yielding a good profit.

**A. RAMSAY & SON,
MONTREAL,**

EST'D 1842. VARNISH MAKERS.

"REGISTERS OF QUALITY"



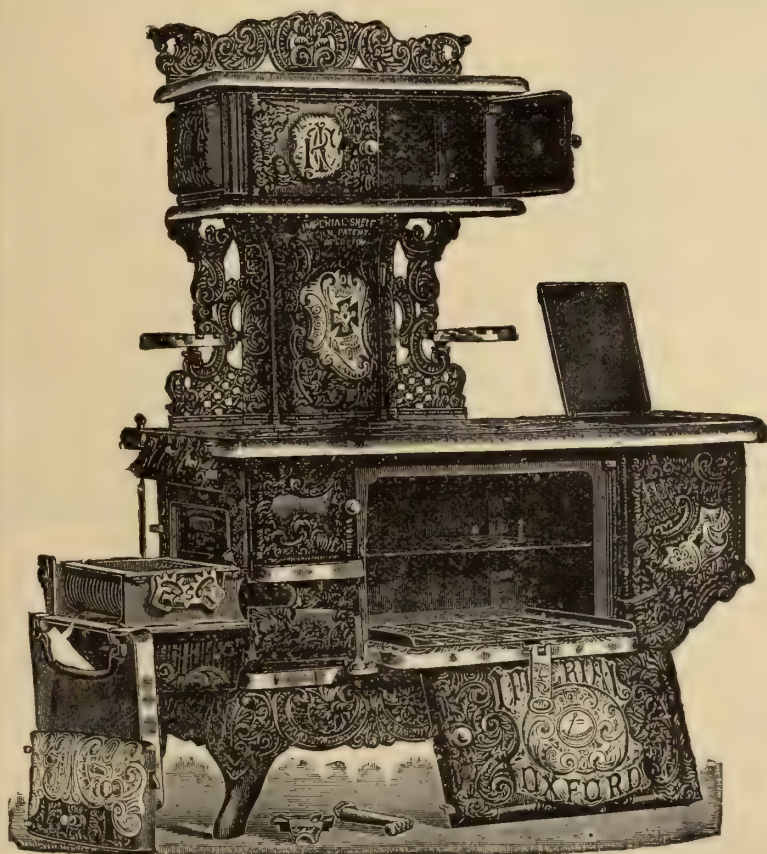
MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,
BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



Imperial Oxford Range.

If you want to do more and better business you should sell the Imperial Oxford Range. We would like to make you our special agent for your district. Write us and we will send you full particulars. There are many reasons why it will pay you to sell the Imperial Oxford.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:
THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., LIMITED
CALGARY, ALTA.

the general understanding is that the new huge enterprise is in reality an interest of the Standard Oil Co., and that the money for the construction of the big mains is made available through the powerful financial interests of that great oil producing corporation.

A Pocket Gas Lighter.

Heine, Solly & Co., London, England, have recently appointed Allen C. Jenking, Coristine Building, Montreal, agent in Canada for their line of gas-lighters, and we illustrate herewith their new aluminum "Bosco" pocket gas-lighter. The cut is the exact size of the lighter when opened for use, and when closed for the pocket this lighter is less than two and a-half inches in length. It is made of burnished aluminum, with the appearance of silver, and weighs one-eighth ounce. The "Solco" self-lighter is designed for household use, and is mounted on a neat wire handle, about ten inches long. The "Holeco" lighter is mounted on black



stick, and is made so that it can be inserted in the tops of gas-globes, incandescent chimneys, etc. These lighters take the place of matches in all cases where gas is used, and a flame is produced immediately the chemical substance is brought in contact with the gas. These goods are selling freely in the Old Country, where they are very largely used for individual and household purposes. Mr. Jenking now has a complete line of samples, and is in a position to quote the Canadian trade.

Ottawa University authorities have taken out a permit to build on lots 5 and 6 Theodore street north, (estimate of cost not yet placed in permit by the applicants, Peter Lyall & Sons, of Montreal).

A new Anglican church will be built in Sturgeon Falls, Ont., this season. Ground has been broken and the foundation is under way. The new structure will be built on the lot adjoining the present church.

BATHING FACILITIES.

THE morning bath has become an absolute necessity to every well-ordered person; health and bodily cleanliness require it. More and more sharply are the lines being drawn between those who practice daily bathing and those who do not. There is only one real aristocracy, and the perfection of bodily cleanliness is the only requirement for admission into its sacred precincts. Tolstoi points out that the rich avoid personal contact with the poor because the latter do not, as a rule, possess this attractive attribute and are therefore offensive. Bathing appliances are a comparatively modern institution. Up to a recent date the abhorred tub was the only facility available and even now the detached tub is the Englishman's favored method of bathing. Even with this antiquated and clumsy method, the results attained in improving the habits of the people are wonderful to contemplate.

Alfred Russell Wallace, one of the greatest scientists of modern times, says that smallpox and other filth diseases have practically become obsolete by reason of greater bodily cleanliness.

Emerson says that no real advance in civilization can be effected until the mass of the people learn this virtue and

act. It is easy to apply six feet of hose well secured to a rose spray. At present this appliance cannot be successfully used without deluging the bathroom. Here the plumbers' art has failed. He stops and does no more. The idea of providing ample curtains does not appear to have entered his head. It is possible he will point to a ring of the size of a barrel with curtain attached, and overhead shower, which requires the bather to stand upright. He overlooks the fact that the bather requires room to move about, and that a woman cannot use the contrivance without drenching her hair. All this can be remedied by providing a curtain holder of light rod suspended over the tub six feet above it and conforming in shape to the tub, but a little larger, so that the curtains will fall and cling to the sides.

This holder can be sustained by a light rod running from a T joint at either end and attached to a wooden disk six inches in diameter fastened to the ceiling. The curtains can be made of rubber, but the best and cheapest material is bleached sheeting. This dries quickly and sheds water as quickly as rubber. The curtains should be fastened to the holder by "S" hooks, which should be sufficiently elongated to prevent slipping off. The tub should invariably be provided with a bath seat. This fixture will not prevent the use of the tub by those who are still wedded to the use of still water. But to those who abhor still water, the fixture may be improved by putting a wooden floor in the bottom of the tub, which will obviate slipping and danger from broken limbs.

The curtains and holder can be cheaply made and sold for a sum not to exceed fifteen dollars. By this appliance a bath can be taken in ten minutes. You do not have to wait to fill a tub nor to wait to empty it. The bath becomes available to several members of the family. All this contemplates the use of old fixtures. The desirable fixture would be the use of a receptor four and one-half feet square. This, with a curtain holder similar to the above, would make an ideal appliance. It would be cheaper and it could be used by old people who are too timid to climb into a tub. The combination faucet should be placed in the bottom of the receptor, and at one side, so that the hose would not interfere with the curtains.

If it is desired to provide a bath at small expense, a space the size of a small closet will be sufficient. The floor can be covered with copper or lead, and the sides with zinc, which can be painted. A curtain can be provided for the entrance to fall inside a small projection, which will prevent the water from entering the room. Appliances on the lines suggested are both cheap and effective. Only a small quantity of water is used, and the time required is very small.

Tiling for the floors is both expensive and constantly getting out of repair.

CHARLES BAYNES, England.
MAKER OF THE KNUZDEN BROOK, BLACKBURN,
"CLICK-CLACK"
HACK SAW BLADES.
In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited
HANOVER, ONTARIO.

Manufacturers of **"Saugeen Brand"**
the Celebrated **OF PORTLAND CEMENT.**
Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,
Cables— Emlyn Engineering Works
"Machinery," Newport. NEWPORT, MON., ENGLAND



Will Hold Up a Shelf !

That's what a shelf bracket is for.
For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the **BRADLEY STEEL BRACKET.** It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

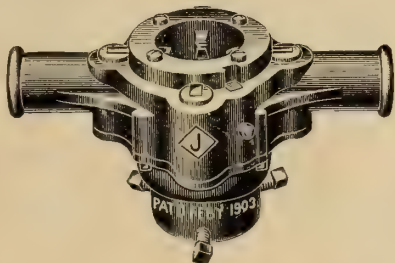
ATLAS MFG. CO.,
New Haven, Conn., U.S.A.

To Manufacturers' Agents

Hardware and METAL has inquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of inquirers in our various offices throughout Canada and in Great Britain without charge.

Address
Business Manager
HARDWARE AND METAL
Montreal and Toronto



It is a fact that one man with our **PATENT PIPE DIE** can easily do the work of two men with any other. Send us your address and we will explain HOW and WHY.

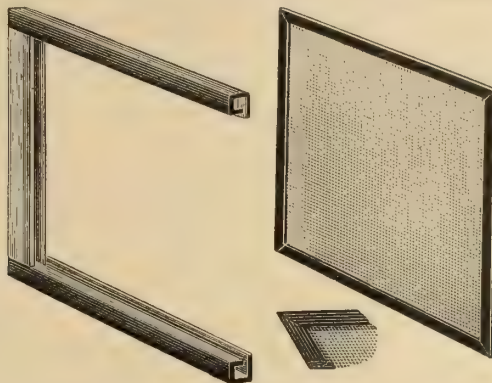
A. B. JARDINE & CO.
Mfrs. TAPS and DIES.
HESPELER, ONT.

PIG IRON

FOR IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.

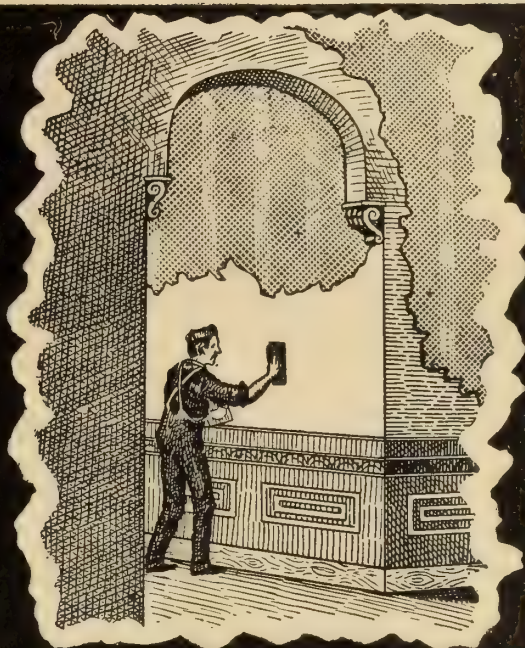


Don't

handle the poor cheap wood screens, when our Metal Screens, which cost not a penny more, are so much better.

C. M. CUTTS & CO.

Makers, Toronto Junction.



Pedlar's "Perfect" Metal Lath

CHEAP AS WOOD

Delivered to any railway station in Canada, for 10c. per square yard. Discount to dealers. Circulars and samples on request.

Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal, Que.

Metal is cheaper and does not require brick and iron foundations, and slight settling does not crack it.

For all private use the small hand spray with hose is preferable, as the lather can apply the water as he wishes—he need not wet his head. Plenty of hose should be provided—at least six feet. A flexible copper hose is now available, which is practically indestructible—a great improvement, as rubber hose frequently bursts, to the great annoyance of the bather.

My suggestions are based on long practical observation and experience, and are made in aid of the only sanitary system of bathing. This method of bathing is in the field to stay, and it is to be hoped ere many years have passed the tub—the abomination of abominations—will have passed away forever.

Building Permits.

TORONTO.

Geo. Rae, store at 347 Yonge street, \$2,000.

King Bros., dwelling on Brock street, \$10,000.

Wm. Reid, dwelling on Dundas street, \$2,500.

W. Munn, store, 800 Yonge street, \$2,600.

C. Johnston, dwelling at 161 Park road, \$1,500.

A. E. Booth, dwelling on Davenport road, \$2,000.

Richard Afmond, 634 Palmerston avenue, \$2,400.

J. J. Walsh, dwelling on Galley avenue, \$36,000.

W. H. Ray, dwelling on Spencer avenue, \$4,500.

E. Parker, dwelling on Bartlett street, \$1,400.

W. Stubbings, dwelling on Grace street, \$4,000.

F. D. Price, dwelling on Sherbourne street, \$5,500.

S. B. Coon, dwelling on Roxborough street, \$7,000.

R. M. Younge, residence on Crawford street, \$3,800.

John O'Neill, dwelling on Parliament street, \$1,500.

Mr. Cowdy, two dwellings on Taylor street, \$3,000.

A. M. Murray, dwelling on Shaw street, \$1,900.

A. A. Briggs, dwelling on Charles street, \$4,000.

Thos. Adair, dwelling on Robinson street, \$1,700.

Geo. Lawrence, office building on Carr street, \$30,000.

W. G. Gooderham, dwelling on Elm street, \$10,000.

E. Willfong, dwelling on Marion street, \$5,000.

Matthews Bros., factory on Dundas street, \$20,000.

A. Stewart, dwellings on Crawford street, \$3,000.

Geo. Nicholson, dwelling, Jones avenue, \$2,000.

J. Marshall, dwelling on Spadina avenue, \$4,000.

Jas. Cowan, dwelling on Howland avenue, \$5,600.

H. M. Death, dwelling on Concord avenue, \$5,000.

M. Smith, dwelling on Westmoreland avenue, \$1,800.

J. Price, dwellings on Ossington avenue, \$8,000.

I. W. Blewes, dwelling on McMaster avenue, \$8,000.

White & Co., dwellings on Ossington avenue, \$10,000.

R. Smith, dwelling on McKenzie crescent, \$5,000.

Jas. Stevenson, dwelling on Roxborough street, \$5,000.

D. McDonald, dwelling on St. Clares avenue, \$4,400.

Chas. Caldwell, warehouse on Front street east, \$1,100.

H. E. Jarman, dwelling on Lansdowne avenue, \$2,000.

H. F. Squires, two dwellings on Euclid avenue, \$11,000.

A. J. Hawken, dwelling on McMaster avenue, \$3,800.

Wm. Davies Co., Ltd., dwelling on Sackville street, \$2,000.

M. A. Armstrong, dwellings on Euclid avenue, \$5,000.

Peter Thompson, dwelling on McMaster avenue, \$3,500.

J. O. Patterson, dwellings on Huron street, \$14,000.

R. C. Vaughan, three dwellings on Beatrice street, \$10,000.

Mr. Wakefield, dwelling on Davenport road, \$4,400.

Thos. Logan, brick dwelling on Broadview avenue, \$2,500.

Thos. Robertson, dwelling on Hepburne street, \$2,000.

T. J. Madill, dwelling on Summerhill avenue, \$5,000.

W. J. Gage & Co., warehouse on Front street west, \$50,000.

J. W. Mickleborough, residence on Chestnut road, \$8,000.

Macpherson Estate, dwelling on Roxborough street, \$4,000.

Macpherson estate, dwelling on Roxborough street, \$4,000.

Parisian Laundry Co., laundry on Portland street, \$20,000.

A. Bradshaw & Son, warehouse on Wellington street west, \$20,000.

H. S. Howland, Sons & Co., warehouse on Front street east, \$45,000.

North American Land Co., three pair dwellings on Euclid avenue, \$12,000.

Central Methodist Church, alterations to church on Bloor street, \$30,000.

MONTREAL.

Antoine Barnbon, Segneurs street, one house, \$3,400.

Brunet & Brunet, Hotel de Ville, two dwellings, \$2,800.

G. M. Gravel, St. Dominique street, two houses, \$1,000.

Wilfrid Proulx, Rivard street, nine dwellings, \$3,000 each.

Camille Verdon, 30 Lalonde avenue, two dwellings, \$2,000.

T. L. Deslauriers, St. Denis street, six dwellings, \$10,000.

J. A. Rivet, St. Hyppolite street, three dwellings, \$2,000.

Joseph St. Jean, Marie Anne avenue, three apartments, \$3,000.

Mrs. J. R. Adams, 64 Desroches street, six apartments, \$10,000.

VANCOUVER.

D. L. Milne, residence on Clark Drive, \$1,275.

M. Wilson, dwelling on 4th avenue, \$2,600.

J. Hill, building on Granville street, \$1,500.

W. Crowder, dwelling on Beach avenue, \$3,000.

F. O'Brien, dwelling on Davie street, \$1,500.

Wm. Arnold, residence on Pendrell street, \$1,600.

A. W. McCallum, residence on 12th Avenue, \$1,500.

W. Leek, two residences on Harwood street, \$7,375.

L. Dak, store and block on C. P. R. ground, \$34,000.

Mrs. Proctor, dwelling on Beach avenue, \$3,200.

J. H. Mandill, dwelling on Pendrell street, \$1,800.

Mrs. Hebden, dwelling on Princess street, \$1,000.

H. J. Moore, four dwellings on Princess street, \$4,000.

Boston Realty Co., addition on Hastings street, \$4,000.

Mrs. Norttigranes, residence on Granville street, \$15,000.

Building Notes.

A hospital is being erected in Goderich, Ont.

A new church is being erected at Embro, Ont.

A new church is being erected in Algoma, near Egansville, Ont.

A school house is to be erected in Davidson, near Winnipeg.

A vaudeville theatre will be erected in Winnipeg in the near future.

The Merchants' Bank of Hamilton are erecting a bank building in Chatham.

The new Methodist church at Baldur, Man., is now well on to completion.

M. Bull is erecting a brick and stone residence on Roslyn road, Winnipeg.

A new rectory will be erected at Carp, near Ottawa, by the Anglicans, to cost about \$4,000.

Building operations have commenced on the three-storey, solid brick hotel in Neepawa, N.W.T.

A new Methodist church is to be erected at the northern limit of the City of Winnipeg shortly.

The city clerk of Winnipeg is calling for tenders for the erection of a fire station on Maple street, Winnipeg.

Over \$4,000 will be spent this Summer in enlarging and improving the Roman Catholic church at Parkhill, Ont.

The Intercolonial Railway are calling for tenders for the erection of brick offices and store buildings at St. John, N.B.

The plans for the new drill hall in Hamilton call for a three-storey brick and stone building, 225 feet long and over 100 feet wide.

Chaley & Orkin, wholesale milliners, Montreal, are about to erect a large steel frame fireproof building, facing on Notre Dame street. The building will cost \$42,000.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

MESSRS. APPLETON AND PRIMEAU, Canadians now living in Michigan, have approached the Government regarding the erection of a smelter on the north shore of Lake Huron. Their idea is to erect a smelter capable of treating 100 or 150 tons of copper ore per day, and to increase the capacity as it is needed. In view of the benefits such a smelter would render the copper mining industry in that district the two promoters of the scheme seek aid from the Government in the form of a bounty. They state that the copper district of the north shore is beginning to attract the attention of investors in the copper camps of Michigan.

* * *

The Pere Marquette Railway has started the construction of their new shops in St. Thomas, Ont. The Geo. B. Swift Co., of Chicago, have the contract for the works, which, it is claimed, will be the finest and largest in Canada, and will cost \$200,000. The Pere Marquette has just acquired the Cincinnati, Dayton and Hamilton Railroad.

* * *

Moncton, N. B., is securing another industry in the Lewisville Brick and Mercantile Co., recently incorporated with a stock of \$24,000. The Cummings brick yard is being refitted with modern machinery and appliances, and employment will be given to from 20 to 30 men. It is intended to manufacture pressed brick for fancy work on the front of buildings.

* * *

Ald. Biggar says that it is not true that Hamilton will lose both the Mansfield Glass Co. and the Diamond Glass Co. He explains that the Diamond Glass Co. has bought the patents and Canadian rights of the Mansfield Glass Co., but this will not interfere with their intention to locate a factory in this city. He is negotiating with them now about a site.

* * *

The report of the Minister of Railways gives the length of railways in Canada, on June 30th, 1903, as 19,836 miles. Of this 19,077 miles were operated by steam, and 759 by electricity. The latter includes the city as well as the suburban and general lines, which are

growing very rapidly. More than two thirds of the railways in this country are owned and operated by the Government and four companies.

NOTES.

The National Table Co., Owen Sound, are installing new machinery.

The Midland Oil and Gas Co., Limited, has been organized in Halifax.

The saw mill of Isaac Hamish, Lake La Rose, N. S., has been destroyed by fire.

The employes of the Maple Leaf Harvest Tool Co., Tilsonburg, ran an excursion to Galt recently.

R. Jackson & Son, Forest, Ont., have sold their planing mill and lumber to J. & J. Kerr Co., Petrolia.

The Menz Lumber Co. and the Dominion Assurance Co. have obtained the right to do business in Manitoba.

The Winnipeg Paint and Glass Co., Winnipeg, Man., are increasing their capital from \$75,000 to \$250,000.

A company has been formed at Arden, Man., with a capital of \$20,000, to run a cement block and building business.

The carriage factory of Willis Bros., Halifax, N. S., has been destroyed by fire. The loss is between \$5,000 and \$6,000.

The annual meeting of the Nanaimo Gas Co., Nanaimo, B. C., has been held, and Dr. Milne has been elected president.

The planing mill of H. and F. D. Swim, Doaktown, N. B., has been destroyed by fire, together with all the machinery.

The saw and planing mill and sash and door factory of J. G. Elliott, at Shawville, near Weston, Ont., have been totally destroyed by fire.

A new company has been formed in Guelph, Ont., known as the Fibre Asphalt Co., whose purpose is to manufacture an asphalt roofing material.

The name of the Dominion Steam Heating Co., Winnipeg, has been changed to John Plaxton Co., Limited, and the capital will be increased to \$50,000.

The flour and oatmeal mill of the Dominion Milling Co., St. John, N. B., has been destroyed by fire. The loss is about \$30,000, with \$18,000 insurance.

The new planing mill of Geo. White, Parry Sound, has been completed, and is now running. The machinery installed is of the best and latest design.

T. R. Parker, of the Petrolia Barrel Co., Petrolia, Ont., has been elected vice president of the National Coopers' Association, which held a recent session at St. Louis.

The preliminary surveys for the building of the large paper, pulp and flour mills, which are to be erected in Fort Frances, Rainy River District, by the American Power Co., are being made.

A company of Swedes have purchased the Lawrence Doyle saw mill at Rosebank, near Newcastle, N. B. The new owners are going to install new machinery.

The plant of the Ontario Corundum Co., at Burgess Mine, near Bancroft, Ont., has been destroyed by fire. The company will probably rebuild at once on a much larger scale.

Work has been resumed on the wire and nail works at Collingwood, and besides the present buildings two large additional buildings will be erected, and the machinery installed in July or August.

The annual meeting of the Watson-Foster Co. was held recently, and the following officers were elected for the ensuing year. Hugh Watson, president; S. S. Boxer, vice-president and general manager; and W. A. Sutherland, secretary-treasurer.

T. G. Blackstock says that while negotiations are still in progress regarding the amalgamation of the Le Roi, Central Star and War Eagle mines in British Columbia, no very definite statement could be made regarding the outcome of the negotiations.

The mayor of Hamilton has received from Berry & Robbes, of Buffalo, a communication saying that they wish to make Hamilton their headquarters for Canadian trade, and that they also wish to locate a branch factory there. The firm manufacture concrete materials.

COMPANIES INCORPORATED.

Reinhardt-Salvador Breweries, Limited, Toronto; capital, \$600,000; purpose, to carry on a brewing business.

The Montreal Dressed Meat Co., Limited, Montreal; capital, \$20,000; purpose, to carry on a general butcher business.

The Quebec Improvement Co., Limited, Quebec; capital, \$100,000; purpose, to carry on a general real estate business.

The Richard Steamship Co., Limited, North Sydney, N. S.; capital, \$10,000;

purpose, to carry on a steamboat business.

The Gibson Lumber Co., Limited, Winnipeg; capital, \$200,000; purpose, to deal in timber limits, timber and coal, and other fuels.

The Naisbitt Co., Limited, Toronto; capital, \$40,000; purpose, to produce, manufacture and deal in food for stock and poultry.

The Dominion Messenger and Signal Co., Limited, Toronto; capital, \$100,000, purpose, to operate a general messenger business.

The Frost Wire Fence Co., Limited, Hamilton, Ont.; capital, \$500,000; purpose, to manufacture and sell wire fences, gates, etc.

J. A. Humphrey & Son, Limited, Humphrey's Mills, N. B.; capital, \$500,000; purpose, to manufacture and deal in wool, yarn, cloth, woollens, worsted and cotton goods.

The Review Publishing Co., Limited, Montreal; capital, \$20,000; purpose, to acquire the copyright of the periodicals, the Canadian Mining review, and the Canadian Mining Manual.

LICENSES GRANTED

The International Falls Realty Co., incorporated in Minnesota, to carry on business in Ontario, using a capital of not larger than \$75,000.

The Many Uses of Cement.

From the ten-storey sky-scraper of Cincinnati, with all its walls and carrying members made of cement or cement and steel construction, to the cement railroad ties used upon some of the western railroads; from the enormous concrete dams erected on the Pacific coast to the small cow stable erected on Pennsylvania farms of this material, there seems to be no known use and no known purpose to which cement in some of its forms of concrete, or steel and concrete, cannot be profitably and successfully utilized.—Exchange.

A BRIGHT HARDWARE CLERK.

WHILE waiting for a train one day last week at a small town I witnessed a good piece of work from the standpoint of the hardware clerk, says B. B., in Hardware Trade. A woman asked to see a carpet stretcher. The clerk who takes pleasure in keeping the stock in nice shape showed her the stretcher handily and made the sale. As she was about to go she caught sight of a padlock

hanging on a display board and said: "Oh, yes; my husband said to buy a lock for the chicken house door." She evidently intended to buy a cheap lock, when her attention was called by the clerk to a different style in the same kind, but costing a little more. Seeing he had her interested, he kept showing her locks and explaining why the better locks were the best investment. She made up her mind that she wanted a good lock and bought one of the best the clerk had shown.

While he was talking locks the clerk had edged his way down to a pile of enamel ware and called the customer's attention to the ware. She was interested, but did not buy. He talked brooms, displayed a thirty-cent broom which the store was especially proud of, and she bought one. He next induced her to buy a good fibre scrub brush. She then started for the front of the store, but on her way past the builders' hardware section she caught sight of a new screen door catch and some door springs. She bought two of the springs and a catch. The next purchase was a half dozen coat hooks, and two pairs of shelf brackets. She evidently then thought she was through, as she started to leave the store. The clerk moved round to the front door to bow her out, but took a last try and showed her the sewing machine. And I tell you that fellow could talk sewing machine. It did me good to hear him warm up and tell about the women who had bought it and how much they liked it.

An ice cream freezer was near, and he explained its workings, and how it could freeze the cream in a very few minutes. He then talked to her on their line of refrigerators, found that she might be in the market later for a gasoline stove, and finally sold her a stove hook and a dipper.

I call that good work. By the time the train came I had received a few pointers for my own good. That clerk will make a merchant, and a good one. He is one of the few. Whenever you find one like him, he is in a store which the women like to visit.

Building operations in Sussex, N.B., are very brisk at present. The Sussex Mfg. Co. are putting up a large blacksmith shop; Geo. Dobson & Son are starting the erection of a fine residence; and there are besides several other residences going up.

Memorial Windows

UNEXCELLED
DOMESTIC ART GLASS

H. E. St. George, London, Ont.

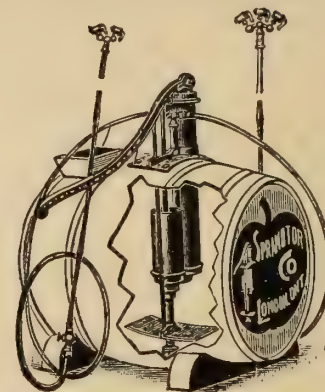
Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

U.S. and Foreign Patents, Caveats, Copyrights and Trade Marks. Military and Naval Inventions a specialty. Address,

Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP
Warren White Sulphur Springs,
Totten P.O., Virginia.



THE SPRAMOTOR

is recognized by the users as the most durable and efficient apparatus yet invented, for the

Prevention of blight and bugs on fruit and potatoes.

For the destruction of wild mustard in the grain crops without injury to the grain, and for

The painting of buildings.

Has been awarded First Place by the Canadian Government in actual contest, and

The Gold Medal at the Pan-American.

The Trade fully protected.

Write for particulars and discounts. Terms liberal.

THE SPRAMOTOR CO.,

68-70 King St.,

LONDON, CAN.



METAL SKYLIGHTS and WINDOW FRAMES
Glazed with FIREPROOF GLASS.

CORRUGATED IRON and FIREPROOF DOORS.

ROOFINGS, CORNICES and CEILINGS.

A. B. ORMSBY LIMITED,
MANUFACTURERS AND CONTRACTORS,
Cor. Queen and George Streets,
TORONTO, ONT.

FULL STOCK

Salt Glazed Vitrified

Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT.

TORONTO, ONT.

ST. JOHNS, QUE.

PORTLAND CEMENTS

Best German, Belgian and English
Brands.

FIRE BRICKS
FIRE CLAY
FLUE LININGS
DRAIN PIPES
HARD WALL PLASTER
CALCINED PLASTER
WHEELBARROWS
MORTAR STAINS.

A Full Stock of Builders' and Con-
tractors' Supplies.

W. McNALLY & CO.

40 to 52 McGill St (Cor. Wellington St.)

MONTREAL.

Write for our quotations.

Permanent, Economical,
Handsome.

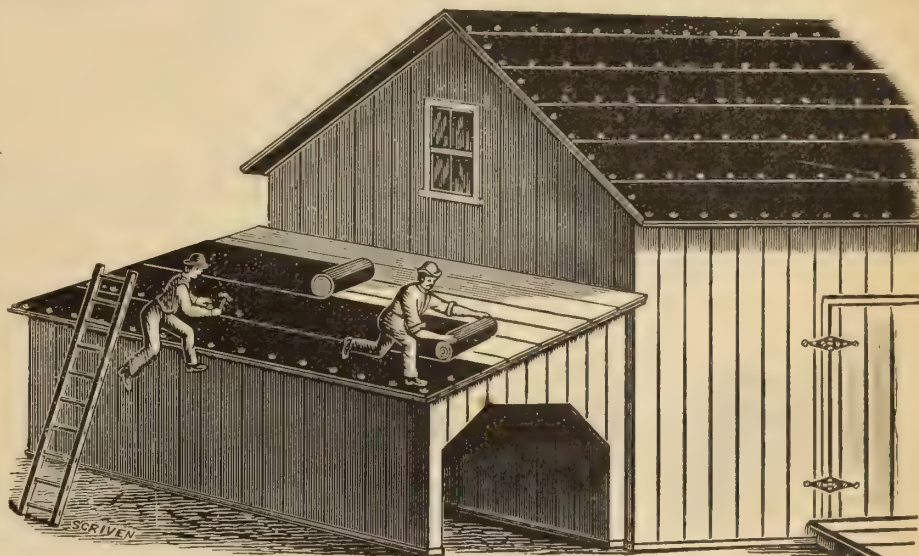
Arrow Brand Asphalt Ready Roofing.

Comes in rolls, ready to lay, with nails and cement.
All ready covered with white sea gravel. No further attention after laid.

A. C. JENKING, Sole Agent,

Room 215 Coristine Building, - MONTREAL.

Sun, Frost, Water, Fumes DO NOT affect it. Write to-day for agency.



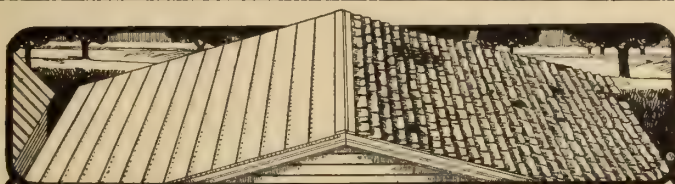
USE MICA ROOFING

For Flat or Steep Roofs. It is Waterproof,
Fireproof, quickly and very easily laid, and
cheaper than other roofing.

HAMILTON MICA ROOFING CO.,

60 Catherine Street North,

HAMILTON, CANADA.



CONSTRUCTION vs. DESTRUCTION.
CARE vs. CARELESSNESS.
BEST MATERIAL vs. POOR MATERIAL.
REX FLINTKOTE ROOFING vs. ALL OTHER ROOFING.

REX Flintkote Roofing
TRADE MARK

The above tells the whole story, and means to the dealer a quick-selling, business-bringing roofing vs. the ordinary kind that never sells, because people don't want it, and when they are persuaded to try it never come back again. If you want satisfied customers for roofing, you should write us to-day about REX Flintkote Roofing.

J. A. & W. BIRD & CO., 49 India Street, Boston, Mass.

Mr. Hardwareman.

Do you get all you can out of the building
operations in your town?

Manufacturers

are making some good propositions on this
page; look over their advertisements and;
if you do not handle their goods, write them
asking for full particulars.

ALWAYS BE READY TO ENLARGE YOUR BUSINESS.

The Saw That Sells Itself.

When placed in the hands of the intelligent mechanic the **ATKINS** High Grade Silver Steel Hand Saw sells itself. You simply show it and the saw does the rest.

ATKINS Silver Steel Hand Saws with Perfection Handles are warranted the **FINEST** Saws on earth in material, temper, grinding and finish.

Write for Catalogue and Prices.

E. C. ATKINS & CO.

C. D. TEN EYCK, Sales Agent for Canada.

Toronto Office: 30 Front St. East. Tel. Main 1896.



ATKINS
ALWAYS AHEAD

Leading Saw and Tool Manufacturers
Factories: INDIANAPOLIS, IND.
Northwestern Branch: Minneapolis, Minn.

Roofing Felt Factory
Harbor St.,
Montreal.

Paper Manufacturers

Paper Mills,
Joliette,
Quebec.

Building Papers

Ready Roofing

Pitch and Roofing Cement

Black Diamond Brand



TARRED FELT.

Brown and Manilla Wrapping

Hanging and Print,

Colored Papers

ALEX. McARTHUR & CO., Office 82 McGill St., Montreal
LIMITED.

CURRENT MARKET QUOTATIONS.

June 17, 1904.

These prices are for such qualities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.
Lamb and Flag and Straits—
56 and 28-lb ingots, 100 lb. \$30 00 \$31 00

TIN PLATES.
Charcoal Plates—Bright.

M.L.S., equal to Bradley—Per box.
I C, usual sizes..... \$6 50
I X "..... 8 00
I X X "..... 9 50

Famous, equal to Bradley—
I C..... 6 75
I X..... 8 25
I X X..... 9 75

Raven and Vulture Grades—
I C, usual sizes..... 4 25
I X..... 5 00
I X X..... 5 75
I X X X..... 6 50

"Dominion Crown Best"—Double
Coated, Tissue.

I C..... 5 50
I X..... 6 50
X X..... 7 50
Allaway's Best—Standard Quality.
I C..... 4 50
I X..... 5 50
I X X..... 6 50

Coke Plates—Bright.

Bessemer Steel—
I C, usual size, 14x20..... 3 35
I C, special sizes, base..... 3 60
20x28..... 7 10

Dean or J. G. Grade—
I C, 20x28, 112 sheets..... 7 50
I X, Terne Tin..... 10 50

Charcoal Tin Boiler Plates.
Cookley Grade—
X X, 14x56, 50 sheet bxs..... 7 00
" 14x60, ".....
" 14x65, ".....

Tinned Sheets.
72x30 up to 24 gauge..... 7 25
" 26..... 7 50

IRON AND STEEL.

Common bar, per 100 lb..... 1 80
Refined..... 2 25
Horseshoe Iron..... 2 75
Hoop steel, 1 1/2 to 3-in. base..... 2 10
Sleigh shoe steel..... 2 30
Tire steel..... 0 13
T. Firth & Co.'s tool steel, per lb 0 12 1/2
B. K. Morton & Co.—
" Alpha " tool steel..... 0 70
" M " Self-Hardening..... 0 60
" I " Standard..... 0 14
Jesseop's high speed steel..... 0 60
" standard tool steel..... 0 14
" crucible steel..... 0 09
Chas. Leonard's tool..... 0 08

CRUCIBLE STEEL CO.

" Black Diamond..... 0 10
" Silver steel..... 0 13
" Special..... 0 17
" Rex high speed steel..... 0 65
" Self Hardening..... 0 45
Sanderson's Crucible Tool..... 0 04
" Superior..... 0 12
" Extra Anal..... 0 15
" Self Hardening..... 0 45
" Rex high speed..... 0 65
Jonas & Colver's tool steel..... 0 10
" Air Hardening..... 0 70
Drill steel, per lb..... 0 08

RABBIT METAL.
"Tandem," A..... per lb. 0 27
" B..... 0 21
" C..... 0 11
Frictionless Metal..... 0 23

Syracuse Smelting Works:
Aluminum, genuine..... 0 45
Government, "..... 0 44
Tough, "..... 0 40
Hard, "..... 0 40
Dynamo..... 0 30
Special..... 0 25
Harmony..... 0 22
Car Box..... 0 20
Extra..... 0 15

The Canada Metal Co.:
Imperial, genuine..... 0 40
Metallic..... 0 30
Hercules..... 0 20
Star..... 0 15
No. 1..... 0 12
No. 2..... 0 10
No. 3..... 0 06
No. 4..... 0 05

Geo. Langwell & Son.
No. 1..... 0 08
No. 2..... 0 07
No. 3..... 0 05 1/2
Extra..... 0 09 1/2

BLACK SHEETS.

10 and 16 gauge..... Montreal. Toronto
18 gauge..... 2 25 2 50
20 "..... 2 30 2 50
22 to 24 gauge..... 2 35 2 70
26 "..... 2 40 2 80
28 "..... 2 40 2 90

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary..... 2 60
All bright..... 3 50
Galvanized Canada Plates—

Ordinary. Dom. Crown.
18x24x52..... 4 25 4 35
" 60..... 4 50 4 60
20x28x80..... 8 50 8 70
" 94..... 9 00 9 20

GALVANIZED SHEETS.

Fleur-de-Lis. Gordon Crown. Comet Bell. Head
16 gauge..... 3 65 3 75 3 75 3 75
18 to 24 gauge..... 3 75 3 75 3 75 3 75
26 "..... 4 00 4 00 3 90 4 00
28 "..... 4 25 4 25 4 05 4 25
American brands, \$4.00 for 28 gauge.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 5-16 "..... 5 60 4 45
" 7-16 "..... 3 85 3 70
" 9-16 "..... 3 55 3 45
" "..... 3 35 3 25
Halter, kennel and post chains, 40 to 40 and 5 per cent.

Cow ties..... 40 p.c.
Tie out chains..... 65 p.c.
Stall fixtures..... 35 p.c.
Trace chain..... 45 p.c.
Jack chain, iron, single and double, discount 35 p.c.
Jack chain, brass, single and double, discount 40 p.c.

COPPER.

Ingot. Per 100 lb.
Casting, car lots..... 13 75
Bars.....
Cut lengths, round, 1/2 to 1 in. 21 00 23 00
" round and square, 1 to 2 inches..... 21 00 23 00

Sheet.
Plain, 16 oz., 14x48 and 14x60..... 20 00
Plain, 14 oz..... 21 00
Tinned copper sheet..... 24 00
Planished..... 32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb..... 0 22
" 35 to 45 "..... 0 21
" 50-lb. and above "..... 0 20

BOILER AND T.K. PITTS.
Plain tinned, per lb..... 0 28
Spun, per lb..... 0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4..... 0 23
Tubing, base, per lb..... 0 23 1/2

ZINC SPELTER.

Foreign, per 100 lb..... 6 00 6 25
Domestic ".....

ZINC SHEET.

5-cwt. casks..... 6 15 6 50
Part casks..... 6 50 7 00

LEAD.

Imported Pig, per 100 lb..... 3 20 3 30
Bar, per lb..... 0 05
Sheets, 2 1/2 lb. sq. ft., by roll..... 0 06 1/2
Sheets, 3 to 6 lb. "..... 0 06
NOTE.—Cut sheets 1c. per lb., extra. Pipe, by the roll, usual weights per yard, lists at 7c. per lb. and 35 p.c. lis. f.o.b. Toronto.
NOTE.—Cut lengths, net price, waste pipe 8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's..... per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00 per 100 lb.; buck, seal and ball, \$7.50. Discount, 17 1/2 p.c. Prices are f.o.b. Toronto, Hamilton, Montreal, St. John and Halifax. Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.
Zinc..... 6 00
Copper, discount 20 per cent. off revised list.

BATHS.

Standard Enameled.
5 1/2-ft. rolled rim, 1st quality..... 21 60
" 2nd..... 17 85

CLOSETS.

Net.
Fittings..... 1 00
Plain Simplex Syphon Jet..... 9 00
Emb..... 9 50
Fittings..... 1 25
Low Down Elgin or Feutonic, plain..... 6 00
Low..... 6 50
Connection..... 1 25
Plain Richelieu..... 4 25
Emb..... 4 50
Connections..... 1 25
Basins, P.O., 14-in..... 0 63
Basins, oval, 17 x 14-in..... 1 50
Basins, " 19 x 15-in..... 2 00

IRON PIPE.

Black pipe—
Inch..... Per 100 feet.
1..... 1 95
2..... 2 05
3..... 2 15
4..... 2 25
5..... 2 35
6..... 2 45
8..... 2 65
10..... 2 85
12..... 3 05
14..... 3 25
16..... 3 45
18..... 3 65
20..... 3 85
24..... 4 25
30..... 4 65
36..... 5 05
42..... 5 45
48..... 5 85
60..... 6 25

Galvanized pipe—
1/2 inch..... 2 88
"..... 3 11
"..... 3 42
"..... 4 40
1 "..... 6 35
1 1/2 "..... 8 80
2 "..... 10 75
2 1/2 "..... 14 80

Malleable Fittings—Discount 20 p.c.
Cast Iron Fittings—
Standard, 57 1/2 per cent.; unions, 55 per cent.; on nipples, headers and flanged unions, 60 per cent.

PLUMBERS' BRASS GOODS.

Standard Compression work, dis. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra discount 10 per cent.
Lever handle Stops and Waste, discount 60 per cent. With, in lots of 2 dozen and over an extra discount of 10 per cent.
J.M.T. Globe, Angle and Check Valves, discount 55 per cent.
Standard Globe, Angle and Check Valves, discount 60 per cent.
Kerr's special standard globes and angles, discount 60 per cent.
Kerr's Jenkin disc, copper-alloy disc and heavy standard valves, discount 60 per cent.
Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator valves, discount 70 per cent.
Kerr's Jenkin disc, copper-alloy disc radiator valves, discount 70 per cent.
Kerr's quick-opening hot water radiator valves, discount 70 and 10 per cent.
Weber's (Kerr) patent straightway gate valves, brass, discount 55 per cent.
Weber's (Kerr) patent straightway gate valves, I.B.B.M., discount 70 per cent.
J.M.T. Radiator Valves discount 55 per cent.
Standard Radiator Valves, discount 60 per cent.

PATENT QUICK-OPENING VALVES, discount 65 per cent.

No. 1 compression bath cock..... net 1 75
No. 4 "..... 1 90
No. 7 Fuller's..... 2 10
No. 4 1/2 "..... 2 25
Patent Compression Cushion, basin cock, hot and cold..... per doz. 15 00
Patent Compression Cushion, bath cock, No. 2208..... 2 25
Square head brass cocks, discount 55 per cent. iron 50 to 60

THOMPSON SMOKE-TEST MACHINE \$25.00

RANGE BOILERS.

Dominion, 30 gallon..... net 4 75
" 35 "..... 5 75
" 40 "..... 6 75
Copper, 30 gallon..... 22 00
" 35 "..... 24 00
" 40 "..... 28 00
Discount off copper boilers 15 per cent.

SOLID PIPE AND FITTINGS.

Light soil " pipe, discount, 50 per cent. fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60 per cent.
7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.

Bar, half-and-half, guaranteed..... 0 19
Bar, half-and-half, commercial..... 0 18
Refined..... 0 18

WRENCHES.

Acme, discount 35 to 37 1/2 per cent.
Agricultural, discount 60 per cent.
Coe's Genuine, discount 20 to 25 per cent.
Towers' Engineer..... each 2 00 7 00
" S..... per doz. 5 80 6 00
G. & K.'s Pipe..... each 3 40 3 40
Burrell's Pipe..... each 3 00 3 00
Pocket..... per doz. 0 25 2 90

P-H

Its Features:



PIPE THAT IS PIPE

Do You Use Wrought Iron Pipe?

The quality will be remembered long
after the price is forgotten.

Write us for Price.

Page-Hersey Iron & Tube Co., Limited, Guelph, Can.



PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt. Less than this quantity 1c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 23
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 35 p.c.	2 00
Burnt sienna	9 00
umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87 1/2
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators Pure	4 75
Monarch	5 00
Decorator's Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25
Genuine, 100 lb. kegs	4 75
No. 1, 560 lb. casks, per cwt	4 00
No. 1, 100 lb. kegs, per cwt	4 25

WHITE ZINC.

Extra Red Seal	0 06
French V. M.	0 06 1/2
Lehigh	0 06

DRY WHITE LEAD.

Pure, casks	4 50
Pure, kegs	4 75
No. 1, casks	4 25
No. 1, kegs	4 50

PREPARED PAINTS.

In 1/2, 1 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peasey's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
Thistle	1 00
Outside, bbls	0 55
Island City House Paint	1 25
Floor	1 25
Sterling House Paint	1 20
Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 10
Bladders in kegs, boxes or loose	1 85
25-lb. tins	1 50
12 1/2 lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 10	1 25
Furniture, extra	0 90	1 00
No. 1	1 10	1 25
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
black japan	1 10	1 20
No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granite floor finish, per gal.	2 75	
Maple Leaf coach enamels; size 1, \$1.20; size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish, assorted case, from 1 to 1 gal., \$2.50.		

GLUE.

Common	0 08	0 08 1/2
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Strip	0 19	0 20
Huttner	0 19	0 20
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 40 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 5 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 10 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

Best thick brown or grey felt wads, in 1/2-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8	0 90
5 and 6	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8	1 65
5 and 6	1 90

ADZES.

Discount 20 per cent.

ANVILS.		
Wright's, 80-lb. and over	0 10 1/2	
Hay Budden, 80-lb. and over	0 09 1/2	
Brooks, 80-lb. and over	0 11 1/2	

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

AXES.		
Chopping Axes		
Single bit, per doz.	7 00	10 00
Double bit, " "	10 00	18 00
Bench Axes, 40 per cent.		
Broad Axes, 25 per cent.		
Hunters' Axes	5 50	6 00
Boys' Axes	6 25	7 00
Splitting Axes	7 00	12 00
Handled Axes		10 00

AMERICAN AXE AND TOOL CO.		
Red Ridge, boys', handled	5 75	
hunters	5 25	
Underhill American Bench Axes, 40 p.c.		

AXLE GREASE.		
Ordinary, per gross	6 00	7 00
Best quality	10 00	12 00

BELLS.		
Hand.		
Brass, 60 per cent.		
Nickel, 55 per cent.		

Cow.		
American make, discount 63 1/2 per cent.		
Canadian, discount 45 and 50 per cent.		

Door.		
Gongs, Sargent's	5 50	8 00
" Peterboro', discount 50 and 10 per cent. off new list.		

Farm.		
American, each	1 25	3 00

House.		
American, per lb.	0 35	0 40

BELLOWS.		
Hand, per doz.	3 35	4 75
Moulders, per doz.	7 50	10 00
Blacksmiths', discount 40 per cent.		

BELTING.		
Extra, 60 per cent.		
Standard, 60 and 10 per cent.		
No. 1, not wider than 6 in., 60, 10 and 10 per cent.		

Agricultural, not wider than 4 in., 75 per cent.		
Augers.		
Gilmour's, discount 60 per cent.		
Rockford, discount 50 and 10 per cent.		
Jennings' Gen., net list.		

Car.		
Gilmour's, 47 1/2 per cent.		

Expansive.		
Clark's, 40 per cent.		
Gimlet.		
Clark's, per doz	0 65	0 90
Diamond, Shell, per doz.	1 00	1 50
Nail and Spike, per gross	2 25	5 20

BLIND AND RED STAPLES.		
All sizes, per lb.	0 07 1/2	0 12

BOLTS AND NUTS		
Carriage Bolts, common (\$1 list)		
" 3-16 and 1/2	60	and 10
" 5-16 and 1/2	55	and 5
" 7-16 and up	55	and 5
" full sq. (\$2.40 list)	60	
" Norway Iron (\$3 list)	60	

Carriage Bolts, common (\$1 list)			
"	"	3-16 and 1/2.....	60 and 10
"	"	5-16 and 1/2.....	55 and 5
"	"	7-16 and up.....	55 and 5
"	"	1-2 and 1/2.....	55 and 5

BOOT CALKS.		
Small and medium, ball	per M.	4 25
Small heel		4 50

BRIGHT WIRE GOODS.		
Discount 62 1/2 per cent.		

BUTCHERS' CLEAVERS.

German	per doz.	6 00	9 00
American	"	12 00	18 00

BUTCHER KNIVES.

Bailey's	per doz.	0 60	6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & I. K. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 600 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 10
Roof " small packages	" 0 25
Refined Tar	per barrel 5 00
Coal Tar	" 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 10

BULL RINGS.

Copper, \$2.00 for 2 1/2-inch, and \$1.90 or 2-inch.

BUTTS.

Wrought Brass, net revised list.

Cast Iron.

Loose Pin, discount 60 per cent.

Wrought Steel.

Fast Joint, discount 65, 10 and 2 1/2 per cent.	
Loose Pin, discount 65, 10 and 2 1/2 per cent.	
Berlin Bronzed, discount 70, 70 and 5 per cent.	
Gen. B. bronzed	per pair 0 40 0 65

CARPET STRETCHERS.

American	per doz.	1 00	1 50
Bullard's	"		6 50

CASTORS.

Red, new list, discount 55 to 57 1/2 per cent.	
Plate, discount 52 1/2 to 57 1/2 per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross	7 50	8 50
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CHALK.

Carpenters' Colored, per gross	0 45	0 75
White lump	per cwt. 0 60	0 65
Red	" 0 05	0 06
Crayon	per gross 0 14	0 18

CHISELS.

Socket, Framing and Firmer.

Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.

Colonial Stock Foods, 50c. packages,	per doz \$4 00
" " " 25c. pkgs., " "	2 00
" " " 10c. " "	75
" " " 25-lb. pall, each	1 80
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz	1 25
Worm " "	1 25
International Stock Foods, \$1 packages,	per doz 8 00
International Stock Foods, per pall	2 75
" " " per bbl	10 50
" " Poultry " \$1 pkgs. per doz	8 00
" " Worm Powders, 50c. pkgs.	4 00
" " Fine Healing Oil, per doz	8 00
" " Pheno-Chloro, \$1 pkgs., per doz	8 00
" " Hoof Ointment	8 00
" " Compound Absorbent	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.	

CLIPS.

Axle, discount 65 per cent.

EASY TO PUT ON HARD TO WEAR OUT

Aptly describes two of the many advantages possessed by Paterson's Wire Edged Ready Roofing, the only popular substitute for Shingles.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.

Plain or Corrugated.

2-inch	per 100 feet	3 00
3 "	"	4 00
4 "	"	5 25
5 "	"	6 75
6 "	"	9 00

CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	per pair	0 17½
S. & D., " 5	"	0 22½
S. & D., " 6	"	0 15
Boynton pattern	"	0 20

DOOR SPRINGS.

Torrey's Rod	per doz.	1 75
Coil, 9 to 11 in.	"	0 95
English	"	2 00

DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Millar's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.

Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

FAUCETROUGHS.

10-inch per 100 ft. 10 00

ELBOWS (stovepipe.)

5 and 6-inch, common	per doz.	1 20
7-inch	"	1 35
Polished, 15c. per dozen extra	"	

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western	70 and 10 per cent.
Arcade	70 " 10 "
Kearney & Foot	70 " 10 "
Dixon's	70 " 10 "
American	70 " 10 "
J. Barton Smith	70 " 10 "
McClellan	70 " 10 "
Eagle	70 " 10 "
Nicholson, 60 and 10 to 60, 10 and 5	
Royal	80 " "
Globe	70 to 75 " "
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.	
Jowitt's, English list, 25 to 27½ per cent.	
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50	

GLASS.

Window. Box Price.

Size United Inches.	Per 50 ft.	Star 100 ft.	D. Diamond 50 ft.	Per 100 ft.
Under 26	3 30			5 06
26 to 40	4 00			5 44
41 to 50	4 50			6 56
51 to 60	4 75			7 50
61 to 70	5 00			8 62
71 to 80	5 30			9 38
81 to 85				10 75
86 to 90				12 30
91 to 95				15 00
96 to 100				18 00
Discount 15 per cent.				

GAUGES.

Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

WIRE GAUGES.

Winn's, Nos. 26 to 33 each 1 65 2 40

GILLET'S POWDERED LYE.

1-case, \$3.60; 3-case, \$3.50; 5-case and over, \$3.40.

HALTERS.

Rope, 1-inch	per gross	12 00
Rope, " "	"	9 00
Rope, 1 to 1½-inch	"	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1½ "	"	5 20
Web	"	2 45

HATCHETS.

Shingle, Red Ridge 1, per doz.	4 40
" 2, " "	4 85
Barrel, Underhill	5 00

HAMMERS.

Nail.	
Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.	

TACK.

Magnetic	per doz.	1 10 1 20
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SLEDGE.

Canadian	per lb.	0 07½ 0 08½
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BALL PEAN.

English and Canadian, per lb.	0 22 0 25
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HANDLES.

Axe, 2nd growth, per doz. net	3 00 4 00
tore door	per doz. 1 00 1 50

FORK.

C. & B., discount 40 per cent., revised list.

HOE.

C. & B., discount 40 per cent., revised list.

SAW.

American	per doz.	1 00 1 25
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PLANE.

American	per gross	3 15 3 75
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Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

Steel barn door	doz. pairs.	8 00 10 00
Stearns, 4-inch	"	4 50
" 5-inch	"	6 00
Zenith	"	9 00
Lane's covered—		
No. 11, 5-foot run	"	8 40
No. 11½, 10-foot run	"	10 80
No. 12, 10-foot run	"	12 60
No. 14, 15-foot run	"	21 00
Steel, covered	"	4 00 11 00
" track, 1 x 3-16 in(100 ft)	"	3 75
" " 1½ x 3-16 in(100 ft)	"	4 75

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½

" " 6-in., " 0 06

" " 8-in., " 0 05½

" " 10-in., " 0 05½

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in. per 100 lb. 4 50

12 in. up. 3 25

Spring, No. 20, per gro. pairs 10 50

HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter per doz. 4 00 4 50

HOLLOW WARE.

Tinned cast, 35 per cent.

HOOKS.

Cast Iron.

Bird cage per doz. 0 50 1 10

Clothes line, No. 61	"	0 00 0 70
Harness	"	0 60 12 00
Hat and coat	per gro.	1 10 10 00
Chandelier	per doz.	0 50 1 00

Wrought Iron. Canadian discount 60 per cent.

Wire.

Hat and coat, discount 60 per cent.

Belt per 1,000 0 60

Screw, bright, discount 60 per cent.

HORSE NAILS.

"C" brand, 40, 10 and 7½ per cent. off list { Oval

"M" brand, 55, per cent. { head

Countersunk, 57½ per cent.

"Monarch," 50 and 7½ per cent.

"Peerless" 50 per cent. dis.

HORSESHOES.

F.O.B. Montreal

Iron Shoes.

Light, medium and heavy

Snow shoes 3 65 3 90

Steel Shoes.

XL, sizes 1 to 5

Light, No. 2 and larger

No. 1 and smaller

Featherweight, all sizes 0 to 4

Toeweight, all sizes 1 to 4

JAPANNED WARE.

Discount 50 per cent.

ICE PICKS.

Star	per doz.	00 3 25
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KETTLES.

Brass spun 7½ per cent. discount off new list.

Copper per lb. 0 30 0 50

American, 60 and 10 to 65 and 5 per cent.

KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,

American per gross 0 60

KNOBS.

Door, japanned and N.P., per

doz. 1 50 2 50

Bronze, Berlin per doz. 2 75 3 25

Bronze, Genuine 6 00 9 00

Shutter, porcelain, F. & L.

screw per gross 1 30 2 00

White door knobs per doz. 2 00

Net prices.

LAMP WICKS.

Discount, 60 per cent.

LANterns.

Cold Blast per doz. 7 00

No. 3, "Wright" 8 50

Ordinary, with O burner 4 00

Dashboard, cold blast 9 00

No. 0 5 75

Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.

Porcelain lined per doz. 2 20 5 60

Galvanized 1 87 3 85

King, wood 2 75 2 90

King, glass 4 00 4 50

All glass 0 50 0 90

LINEs.

Fish per gross 1 05 2 50

Chalk 1 90 7 40

LAWN MOWERS.

Woodyatt, 10½-in. wheel, 14-in. cut .. 8 50

Star, 9-in. " " 7 00

Daisy, 8-in. " " (net) 2 87½

Philadelphia, 7½-in. " " 7 00

Ontario, 7½-in. " " 15 80

King Edward, 12-in. " " 9 50

Discount 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:

10½-in. high wheel 7 50 10 00

9-in. " 5 50 6 25

8-in. " 4 90 5 50

Discount 50 per cent.

LOCKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwin per doz.

Cabinet. Eagle, discount 30 per cent.

Padlocks. English and Am. per doz. 0 50 6 00

Eagle, discount 20 to 25 per cent.

MACHINE SCREWS.

Iron and Brass.

Flat head, discount 25 per cent.

Round head, discount 20 per cent.

MALLETS.

Tinsmiths' per doz. 1 25 1 50

Carpenters', hickory, " 1 25 3 75

Lignum Vitae, " 3 85 5 00

Caulking, each 0 60 2 00

MATTOCKS.

Canadian per doz. 5 50 6 00

MEAT CUTTERS.

American, discount 3½ per cent.

German, 15 per cen

Gem each 1 15

MILK CAN TRIMMINGs.

Discount 25 per cent.

NAILS. Cut. Wire.

2d and 3d 3 30 3 45

3d 2 95 3 12

4 and 5d 2 70 2 95

6 and 7d 2 60 2 80

8 and 9d 2 45 2 60

10 and 12d 2 40 2 55

16 and 20d 2 35 2 50

30, 40, 50 and 60d (base) 2 30 2 45

Cut nails in carlots 5c. less.

Wire nails in carlots are \$2.40.

Steel cut nails 10c. extra.

Miscellaneous wire nails, discount 75 per cent.

Remington Raises Records

The new C.E.O. Trap Gun established the five-man squad world's records—1454-1500 clay targets, 97 per cent., in three consecutive days.

Do you care for record-breaking scores? The new Remington C.E.O. gun, listing at \$95.00, is a revelation to those who have been used to old-style guns.

ILLUSTRATED CATALOGUE FREE

REMINGTON ARMS CO., ILION, N.Y.

Agency: 315 Broadway, New York City.

Depot: 86-88 First St., San Francisco, Cal.

PLANE IRONS.		SAP SPOUTS.		STAPLES.		ENAMELLED WARE.	
English	per doz. 2 00 5 00	Bronzed iron with hooks ...	per 1,000 7 50	Galvanized	3 00	White, Princess, Turquoise, Blue and White	
FLIERS AND NIPPERS.		"Eureka" tinned steel, hooks "	8 00	Plain	2 80	discount 50 per cent.	
Button's genuine, per doz. pairs, discount		SAWS.		Coopers', discount 45 per cent.		Diamond, Famous, Premier, discount 50 and	
37½ to 40 per cent.		Hand, Diaston's, discount 12½ per cent		Poultry netting staples, discount 40 per cent.		10 per cent.	
Button's imitation	per doz. 5 00 9 00	S. & D., discount 40 per cent.		STOCKS AND DIES.		Granite or Pearl, Imperial, Crescent, discount	
German	" 0 60 60	Crosscut, Diaston's, ... per foot 0 35 0 55		American discount 25 per cent.		50, 10 and 10 per cent.	
PRESSED SPIKES.		S. & D., discount 35 per cent. on Nos. 2 and 3.		STONE.		Premier steel ware, 40 per cent.	
Discount 20 per cent.		Hack, complete, ... each 0 75 2 75		Washita	per lb. 0 28 0 60	"Star" decorated steel and decorated white,	
PULLEYS.		" frame only, ... each 0 50 1 25		Hindostan	" 0 06 0 07	25 per cent.	
Hothouse	per doz. 0 55 1 00	SASH WEIGHTS.		Labrador slip	" 0 09 0 09	WIRE.	
Axle	" 0 22 0 33	Sectional	per 100 lb. 2 00 2 25	Axe	" 0 13 0 13	No. 9 gauge	\$2 50
Screw	" 0 27 1 00	Solid	" 1 50 1 75	Turkey	" 0 15 0 15	10 "	8c. extra.
Awning	" 0 35 2 50	SASH CORD.		Water-of-Ayr	" 1 50 1 50	11 "	12c.
PUMPS.		Per lb.	0 28 0 30	Scythe	per gross 3 50 5 00	12 "	20c.
Canadian cistern	1 80 3 60	SAW SETS.		Grind, 2-in., 40 to 200 lb., per ton	25 00	13 "	30c.
Canadian pitcher spout	1 40 2 10	Lincoln and Whiting	4 75	" under 40 lb., ...	28 00	14 "	40c.
PUNCHES.		Hand Sets, Perfect	4 00	" under 2 in. thick, ...	29 00	15 "	55c.
Saddler's	per doz. 1 00 1 85	X-Cut Sets, ...	7 50	STOVEPIPES.		16 "	70c.
Conductor's	3 00 15 00	SCALES.		5 and 6 inch, per 100 lengths	7 00	Smooth Steel Wire.	
Pinners', solid	per set 0 72	Gurney Standard, 40 per cent.		7 inch	7 50	No. 10 gauge	\$2 50
" hollow	per inch 1 00	Gurney Champion, 50 per cent.		ENAMELINE STOVE POLISH.		11 "	8c. extra.
RAKES.		Burrow, Stewart & Milne—		No. 4, 3 doz. in case, net cash	4 80	12 "	12c.
Wood	per doz. net 1 20 up	Imperial Standard, discount 40 per cent.		No. 5, 3 doz. in case, ...	8 40	13 "	20c.
RAZORS.		Weigh Beams, discount 35 per cent.		TACKS, BRADS, ETC.		14 "	30c.
Elliot's	4 00 18 00	Champion Scales, discount 50 per cent.		Carpet tacks, blue, ...	80 and 15	15 "	40c.
Geo. Butler's & Co.'s	4 00 18 00	Fairbanks standard, discount 35 per cent.		" tinned	80 and 20	16 "	55c.
Boker's	7 50 11 00	Dominion, discount 55 per cent.		Cut tacks, blue, in dozens only	40	17 "	70c.
" King Cutter	12 50 15 00	Richelieu, discount 55 per cent.		" weights	60	18 "	85c.
Wade & Butcher's	3 60 10 00	Warren's new Standard, discount 40 per cent.		Swedes cut tacks, blue and tinned—		Fine Steel Wire, discount 25 per cent.	
Theile & Quack's	7 00 12 00	" Champion, discount 50 per cent.		In bulk	80 and 10	List of extras: In 100-lb. lots: No. 17,	
Carbo Magnetic	15 00	" Weighbeams, discount 35 per cent.		In dozens	75	\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—	
Griffon Barber's Favorite	10 75	SCREW DRIVERS.		Swedes, upholsterers', bulk, ...	85, 12½ and 12½	No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No.	
Griffon No. 65	13 00	Sargent's	per doz. 0 65 1 00	brush, blue and tinned	70	\$4—No. 25, \$9—No. 26, \$9.50—No. 27,	
Griffon Safety Razors	13 50	SCREEN DOORS.		Swedes, gimp, blue, tinned and		No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,	
Griffon Stopping Machines	13 50	Common doors, 2 or 3 panel, walnut		japanned	75 and 12½	\$17. Extras net—tinned wire, Nos. 17-25,	
Lewis Bros. "Klean Cutter"	8 50 10 50	stained, 4-in. style	per doz. 6 50	Leather carpet tacks	35	\$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,	
REGISTERS.		Common doors, 2 or 3 panel, yellow and		Copper tacks	55	5c.—oil, 10c.—in 25-lb. bundles, 15c.—in 5	
Discount 40 per cent.		green stained, 4-in. style	per doz. 6 75	Copper nails	50	and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.	
RIVETS AND BURRS.		Common doors, 2 or 3 panel, in natural		Trunk nails, black	65 and 5	—in 4-lb. hanks, 38c.—in 4-lb. hanks, 50c.—	
Iron Rivets, black and tinned, discount 60 and		colors, oil finish	per doz. 8 75	Trunk nails, tinned	65 and 10	packed in casks or cases, 15c.—bagging or	
10 per cent.		3-in. style 20c. per dozen less.		Clout nails, blue	65 and 5	papery, 10c.	
Iron Burrs, discount 55 per cent.		SCREWS.		Chair nails	35	Brass wire, discount 60 per cent. off the list.	
Extras on Iron Rivets in 1-lb. cartons, 1c.		Wood, F. H., bright and steel, discount 87½		Patent brads	40	Copper wire, discount 60 per cent. net cash	
per lb.		per cent.		Patent brads	40	30 days, f.o.b. factory.	
Extras on Iron Rivets in 4-lb. cartons, 1c.		Wood, R. H., bright, dis. 82½ per cent.		Fine finishing	40	Galvanized wire, per 100 lb.—Nos. 4 and 5,	
per lb.		" F. H., brass, dis. 80 per cent.		Lining tacks, in papers	10	\$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.16	
Copper Rivets, with usual proportion burrs, 45		" R. H., dis. 75 per cent.		" solid heads, in bulk	15	—No. 9, \$2.55—No. 10, \$3.20 to \$3.20	
per cent. discount. Cartons, 1c. per lb.		" F. H., bronze, dis. 75 per cent.		" in bulk	15	—No. 11, \$3.25 to \$3.25—No. 12, \$2.65	
extra, net.		" R. H., dis. 70 per cent.		Saddle nails, in papers	15	—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.	
Copper Burrs only, discount 30 and 10 per cent.		Drive Screws, dis. 87½ per doz. 3 25 4 00		Tufting buttons, 22 line, in doz-		15, \$4.30—No. 16, \$4.30. Base sizes, Nos.	
Extras on Tinned or Coppered Rivets, 4-lb.		Bench, wood	per doz. 4 25 5 00	ens only	60	6 to 9, \$2.27½ f.o.b. Cleveland. In carlots	
cartons, 1c. per lb.		" iron	4 25 5 00	Zinc glaziers' points	5	12c. less.	
RIVET SETS.		Set, case hardened, dis. 60 per cent.		Double pointed tacks, papers	90 and 10	CLOTHES LINE WIRE, regular 7 strand, No. 17,	
Canadian, discount 35 to 37½ per cent.		Square Cap, dis. 50 and 5 per cent.		Clinch and duck rivets	45	\$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow	
ROPE, ETC.		Hexagon Cap, dis. 45 per cent.		TAPE LINES.		6 strand, No. 17, \$4.30; No. 18, \$2.70; No.	
isal	0 101	SCYTHES.		English, ass skin	per doz. 2 75 5 00	19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,	
Pure Manila	0 13	Per doz. net	6 00 9 00	English, Patent Leather	5 50 9 75	Toronto, Montreal.	
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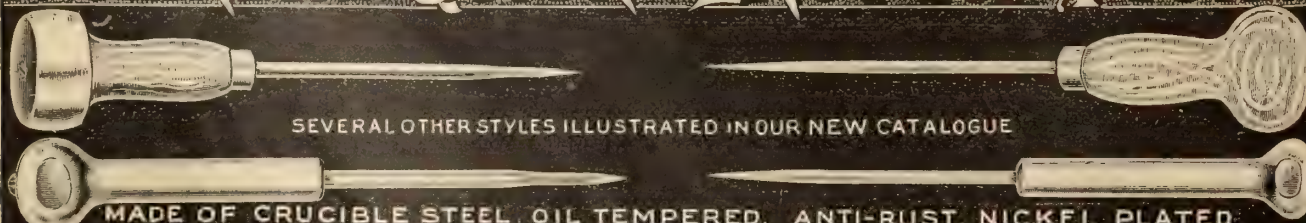
HAMILTON, ONT.
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WILL NOT BEND, BREAK OR RUST. EACH ONE TESTED AND GUARANTEED.

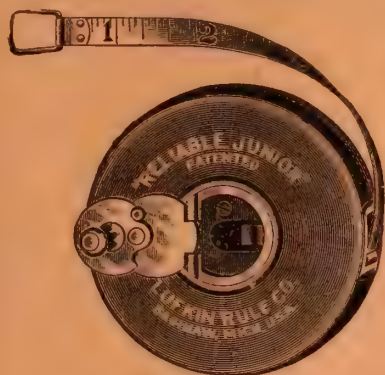
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Bars in Flats, Rounds, Squares,
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GOOD QUALITY. PROMPT SHIPMENT.

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LUFKIN MEASURING TAPES

Steel, Metallic, Linen, Pocket, Ass Skin,
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ARE THE BEST AND MOST POPULAR TAPES IN THE WORLD.
YOUR STOCK IS NOT COMPLETE WITHOUT THEM.

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For sale by ALL PROMINENT CANADIAN HARDWARE JOBBERS.



REGISTERED TRADE MARK

Gilt Edge
650 FT.

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Best in Quality.

Product of Canadian Industry.

Growing in Popularity.

BEST—For the Dealer to buy to sell
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in the recent Toronto Conflagration were saved from destruction by their own private Fire Hose, purchased from us by owners who were long-headed enough to know the value of such protection. Are you in need? If so, don't delay, but write us at once for prices.

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Best English Cement, "White's"
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In Barrels or Sacks

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Our Leather Belting

is made from the best stock procurable, tanned by our own methods. We believe in our own process of manufacture and we rest our reputation on the **quality** of our brands—

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A Weekly Newspaper devoted to the Hardware, Metal, Machinery,
Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, JUNE 25, 1904.

NO. 26



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IT'S "QUEEN'S HEAD"

That's all you need to know
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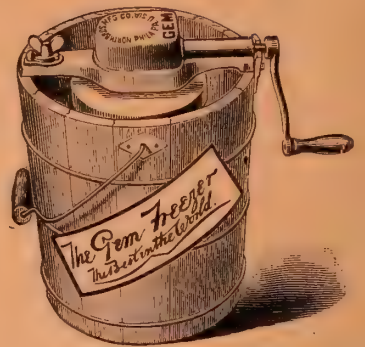
BLIZZARD FREEZER

DEALERS

should have our prices
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Ice Boxes, Ice Tongs,
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The GEM FREEZER

RETURNED
JUN 25 1904
at Book 19
Page 51
ans.



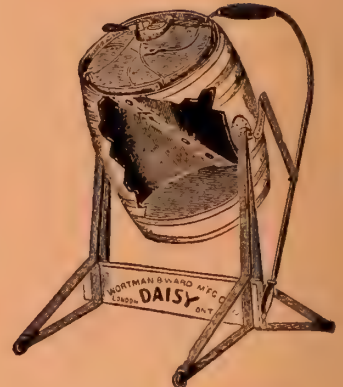
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**The BARTON GILLETTE HORSE
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SOMETHING ENTIRELY NEW IN HAND CLIPPERS.

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which has enabled
us to secure all
prizes and medals
awarded for Horse
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The plates are
considerably wider
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Clipper, thus
enabling the user
to do more work.
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HORSE SHOE PADS

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Write for Prices and Circulars.

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Other Tools are very
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“YANKEE TOOLS” ARE BETTER



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tells all about them. Mailed
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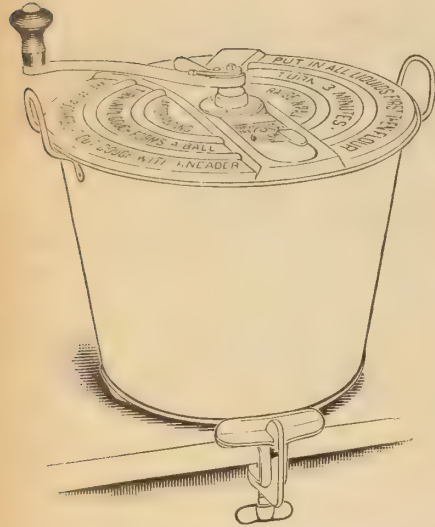
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we do so with confidence,
knowing it will do all that
is said of it.

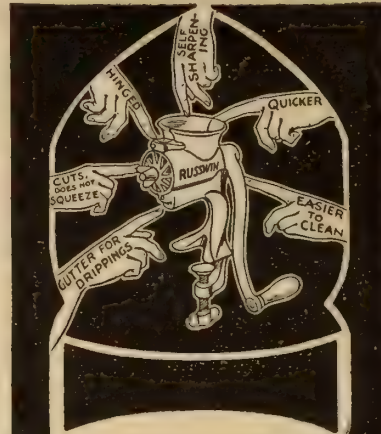
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bread in **3** minutes may
seem extravagant, but it
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Here is a

**MIXER, KNEADER and RAISER
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The old and disagreeable task of Bread-making is done away with.

We shall be pleased to send booklets for your customers, and give prompt
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MANY POINTS

of excellence are found only
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Its knives are self-sharpening.
Case stands high from table,
permitting use of large dish.
A trial will reveal many other
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where. Made by

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**GALVANIZED SHEETS,
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ZINC SHEETS,
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**METALS, ANTIMONY, COPPER, TIN, LEAD, ZINC,
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"Quality,"

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For sixty years each tool bearing the "mark of Quality" has been telling abroad the story of superiority which has put Disston's Tools as far ahead of the rest as their sixty years is ahead of ten or fifteen.

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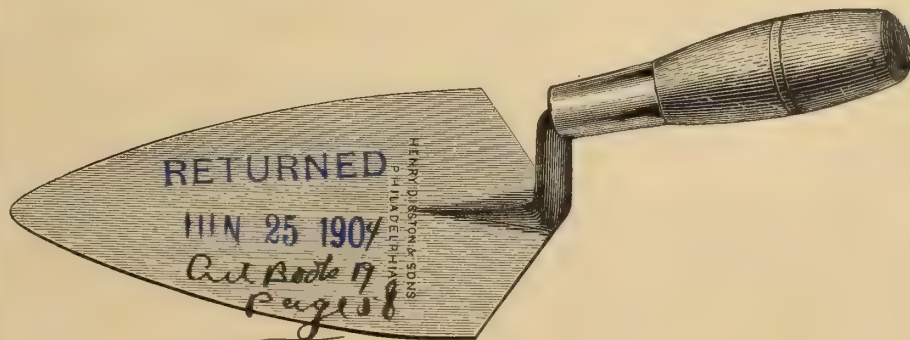
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No. 107. Hand Saw



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JUN 25 1904

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Page 108

No. 10. Brick Trowel

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Cordage
Of every description.

Net Mountings,

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Dangerous to use Inferior Cordage.

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To us and

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Low-priced goods are not always
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Illustration shows

AMERICAN ^{FLAT} LINK "THREE CHAIN" TYPE

Also made in "CLOSED RING," "OPEN RING"
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Oneida Community Cow Ties can be had of all the leading jobbers.
We invite correspondence where any difficulty is experienced in
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ONEIDA COMMUNITY, Limited.
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STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

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**WOOD SCREWS,
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WIRE OF ALL KINDS
AND
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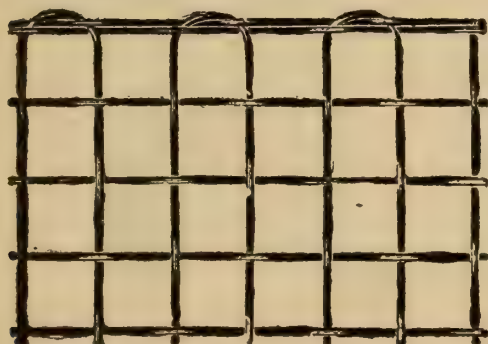
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**BARBED WIRE CALVANIZED PLAIN WIRE
PLAIN TWIST CABLE FENCING**

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of
every description; Rail Bonds, Bale Ties, Special Wires for all
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Sand Screens.
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Smoke Stacks.
Mining Screens
And for all purposes.

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N.B. We also make Hard and Soft Shot but strongly recommend Improved Chilled Shot for penetration.

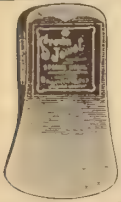
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ONTARIO SILVER CO.,

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Manufacturers of **FLATWARE, CUTLERY and ELECTRO PLATE.**
Ask for our Catalogue and Quotations.



Dundas Axe Works

DUNDAS, CANADA.

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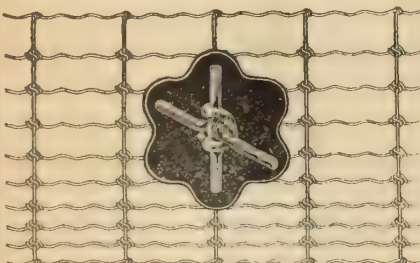
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For Manufacturers of
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All our work is guaranteed to be satisfactory.

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Your Customers

the farmers are looking for a fence, strong, serviceable and durable at a reasonable cost. You can supply it to them in the

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It is strictly up-to-date and the best value to be had in wire fencing to-day.

A GOOD SELLER

We have a style for every purpose in either heavy or light fencing. Write for catalogue showing fencing and gates.

Coiled-Spring Wire

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Sole Agents for Manitoba and N. W. T.



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STRONG, TOUGH AND STIFF
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WRITE US FOR
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WIRE NAILS, COILED SPRING, BARB and PLAIN FENCE WIRE, OILED and ANNEALED, CLOTHES LINE WIRE, STAPLES, etc.

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"Little Shaver"

Canadian Agents:

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Cutest Thing in the Kitchen

Shaves chocolate so thin that it dissolves without stirring.
Slices Potatoes, Radishes, Cucumbers, Onions, Apples and all the smaller fruits and vegetables
Made of black walnut.
Knife is fine tempered steel.

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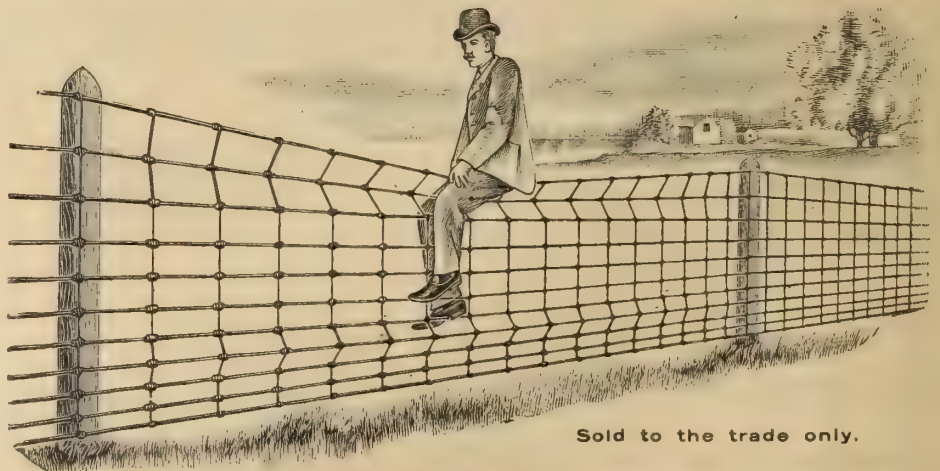
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THE HINGE IS COMPLETE, AND WORKS WITH THE UTMOST FREEDOM.



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BINDER TWINE.



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Cut Boring
Page 76
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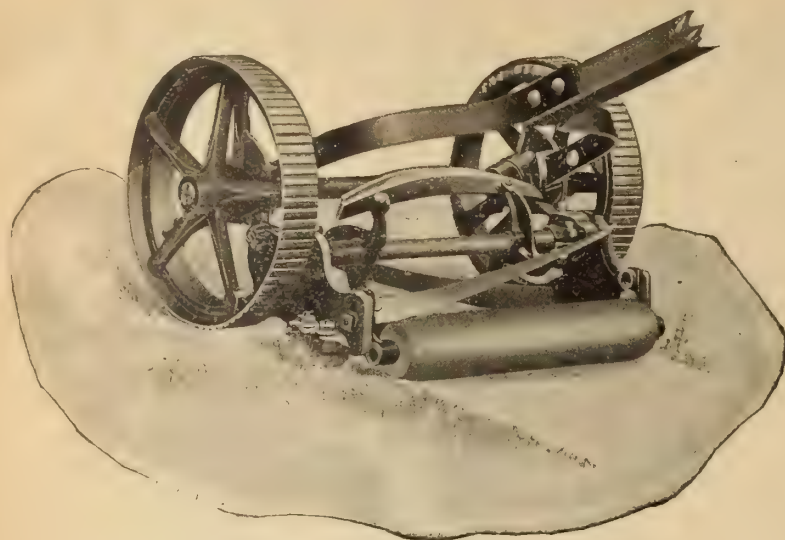
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Our "ROYAL" Brand of Binder Twine is manufactured of the finest raw material that can be obtained, and with the utmost care. For length and strength we have no competitors. Our twine is manufactured with the latest machinery, and dealers desiring to have exclusive agencies should apply at once.

Write, Wire or 'Phone.

CANADIAN CORDAGE & MFG. CO., Limited
Peterborough, Ont.



The "STAR."

They Work Well They Wear Well

Hence Taylor-Forbes mowers sell well. There is no other Lawn Mower that serves the hardware dealer and his customers as well as these liberally guaranteed mowers of our manufacture.

Order at once.
Prompt delivery.

Send for Catalogue "B." When writing, give your jobber's name.

THE TAYLOR-FORBES CO., Limited
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Montreal Branch:
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The largest manufacturers of Hardware in Canada.

Kemp's Cold Blast Lanterns

The success which our Lantern has achieved is largely demonstrated by the points of superiority that it possesses.

A Combination Lift and Hinge Lantern.

It is easily adjusted.

Its burning qualities are unexcelled—

WILL NOT BLOW OUT.
WILL NOT SMOKE.
WILL NOT LEAK.
WILL NOT BREAK GLOBES.

If your customers desire such a lantern, sell them ours.

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JUL 15 1905

To answer.

Out Book 37

Page 87

W. W.



THEY DO NOT COST MORE THAN OTHER MAKES

KEMP MANUFACTURING CO., TORONTO, CAN.

WESTERN BOARD OF TRADE CONVENTION

The first Board of Trade Convention of the Northwest Territories, held in
Calgary, Alta, June 15-16, 1904.

THE latest milestone marking the forward course of commercial development and consolidation in Western Canada is the inauguration of the first Board of Trade Convention, which took place at Calgary, Alta, on June 15-16, 1904. Fifty-seven delegates, representing the leading business men of the section bounded by Winnipeg on the east, Nelson, B.C., on the west, Edmonton on the north, and Cardston on the south, were present at the opening meeting, as well as staff representatives of the daily papers of Winnipeg, Toronto, Montreal, Vancouver and St. Paul, Minn. No more substantial testimony is necessary to the industrial significance of the convention which it is calculated will solidify for united action thousands of the leading business men of the Northwest Territories, wherever the promotion of the West is concerned, whether it be in finance, commerce or agriculture. Hardware and Metal is indebted to the Weekly Herald, Calgary, for a full report of the first day's proceedings.

Opening Address.

In greeting the visitors and outlining the purpose of the congress, W. H. Cushing, acting in the capacity of temporary chairman, spoke as follows: Gentlemen: I esteem it a high honor, as well as a great pleasure, to extend to this large and representative gathering the hearty greetings of the Calgary Board of Trade, and to welcome you to our city.

In the month of January last year a letter was sent by the Calgary Board of Trade to as many sister organizations in the Territories as we had record of, inviting expressions of opinion as to the feasibility of holding a convention of delegates from such bodies at a central point in the West. Responses were received from many of these organizations favoring the proposal, and Calgary was suggested as a suitable place for the first convention, the next place of meeting to be decided at each convention. These, in brief, are the events that led up to the Calgary

Board of Trade taking the responsibility upon itself of calling this convention.

It would be difficult, I think, I may say impossible, to estimate the value of a convention of this nature, representing as it does the business interests of a vast country with limitless possibilities and resources. We have with us representatives from Manitoba on the east and British Columbia on the west, and from all parts of the Territories, which comprise the largest part of our great Dominion.

It appears to me that such an important gathering for the purpose of discussing questions that are of vital interest to all parts of the country we represent cannot help but establish a strong bond of fellowship between the business men of all parts of this vast country and materially assist us to acquire a broader, more intelligent and more sympathetic view of the commercial and economic disabilities each section of this vast country labors under and the difficulties that confront the various branches of industry represented in our midst. Under the circumstances, the deliberations of this convention should be a potent factor in helping to build up a solid and vigorous national life. While the commercial interests of a country may not be the greatest factor in the upbuilding of a nation, it is certainly one of the greatest, and requires the best consideration of the best minds the country can produce. There are many sides to the questions involved in establishing a good, sound commercial life in a new country and I know of no better way to assist in this great work than for those who are engaged in trade and commerce to gather at stated periods for the purpose of intelligently discussing and considering ways and means to accomplish the end aimed at. With this object in view, the Calgary Board of Trade has now taken the first step towards organizing what we devoutly hope will become an annual event, second to none in importance in the West. Whatever the final outcome of this action may be, it is extremely gratifying

to the board that we have met with such a hearty response from all parts of the Territories, as well as from Manitoba and British Columbia."

Delegates.

Following were the delegates present at Wednesday morning's session:

Calgary—W. H. Cushing, J. J. Young, M.L.A.; A. Allan, R. B. Bennett, M.L.A.; A. E. Cross, Wm., Pearce, D.L.S.; M. Morris, C. W. Petersen, Dr. Lafferty, Mayor Ramsay.

Cardston—W. C. Simmons, Mark Spencer.

Didsbury—J. E. Stauffer, B. J. Smith.

Edmonton—J. H. Morris, G. W. Lines, Wm. Short, K. W. McKenzie, J. A. MacDougall.

Grenfell—John Walker.

Indian Head—A. McCaul, Jas. Conn.

Innisfail—J. E. Faudry, H. M. Stewart.

Lacombe—C. T. Daykin.

Lethbridge—M. Barford, L. M. Johnston, Dr. DeVeber.

Maple Creek—John Dixon, W. R. Abbott.

Medicine Hat—David Milne, Thos. Tweed, C. R. Mitchell.

Moose Jaw—Wm. Grayson, D. McLean, G. K. Smith.

Moesomin—E. M. Saunders.

Olds—Geo. H. Cloakey.

Ponoka—Eugene Rhian.

Prince Albert—Judge McGuire.

Raymond—A. E. Moore, G. W. Green.

Red Deer—H. H. Gaetz, R. L. Gaetz, J. L. Crawford.

Regina—H. F. Mytton, H. W. Laird, Jas. Balfour.

Strathcona—J. M. Douglas, Jno. McFarland.

Wapella—Wm. J. Tudge, E. S. Zingg.

Weyburn—T. H. Blacklock.

Wetaskwin—J. F. F. Fowler, H. H. Morgan, V. C. James.

Yorkton—J. A. Magee.

Golden—F. W. Jones.

Saskatoon—M. Isbister.

Mayor Ramsay's Address.

Mayor Ramsay addressed the convention briefly and on behalf of the

city tendered them the freedom of the community. He declared the occasion pregnant with the cordial spirit of the west, and predicted much substantial benefit to all the towns participating. He prefaced his remarks by alluding to the amazing industrial development of the Territories and expressing the conviction that the present activity in all business circles is a fair indication of the bright future of Western Canada.

R. B. Bennett, of Calgary, nominated Thos. Tweed, of Medicine Hat, chairman and J. W. Morris, of Edmonton, and H. W. Laird, as vice-chairmen. The motion was adopted.

Chairman Tweed suggested a committee on resolutions immediately and an adjournment until the various subjects on the programme could be informally discussed. The convention adjourned until 2.30, while the committee at once went into session.

Resolution Committee.

The Resolution Committee held an animated session. An elaborate programme was sifted and arranged.

It was moved by Thos. O'Brien, of the Golden Board of Trade:

Resolved,—That in the opinion of this convention a duty of \$2 per thousand should be imposed upon American lumber entering Canada, under such conditions and restrictions as will absolutely prevent any increase in price arising by reason of the imposition of such duty as aforesaid.

A resolution was favored introduced by D. T. Daykin, of Lacombe, that the Government stock certain lakes of the Northwest with white fish. Buffalo, Gull, Pine and other lakes in Alberta were included.

W. J. Tudge, of Wapella, urged that every man having the best interests of the country at heart should try to keep out of the convention all political questions. This was apparently the sentiment of the committee.

It was recommended by the committee that in future meetings all resolutions intended to be introduced should be in the hands of the secretary ten days before the meeting.

The subject of immigration and of closer scrutiny of undesirable classes of new citizens received the serious attention of the committee. H. C. Alexander, of Winnipeg, on behalf of the Western Canada Immigration Association, was granted permission to address the meeting on the progress of the organization.

It was the sense of the committee that a line of action should be decided on that would absolutely prevent any subject being passed upon by the convention without proper notice. To this end it was suggested that topics of prime importance should be scheduled to come up at certain hours, regardless of discussions that might be on at that time.

William Short, Mayor of Edmonton, introduced a resolution declaring that in the opinion of the convention the development of the resources of the Territories amply justifies and urgently requires the immediate and rapid construction of the projected Canadian Northern and Grand Trunk Pacific. The committee favored sending it to the convention.

The following resolution of great importance to Calgary was introduced by William Pearce, D.L.S., and favored by the committee:

"That it is highly desirable that as soon as possible a thorough investigation be made into the probability of the C.P.R. ports under present conditions being made the outlet to European markets for the grain, dairy products, cured and dead meats, for the western portion of the Northwest Territories.

"That with the completion of the Panama Canal the territory that will be economically tributary to said ports for the above mentioned shipments will be very largely extended.

"That for shipments to Asia, Australia and South Africa, those ports are the natural and cheapest outlet.

"It is therefore urged that the whole question of present and probable future traffic through these ports be closely studied.

"With that in view, it is urgent that this subject be brought forcibly to the attention of the transportation commission appointed by the Federal Government, at present investigating Canadian transportation problems, and that said commissioners be requested so far as may lie in their power, to thoroughly investigate and report on this subject.

"That a copy of this resolution be submitted to the Federal Government with a request that as far as may be possible effect be given to it."

Report on Resolutions.

Following is the report of Committees on Resolutions and Procedure, presented to the convention this afternoon:

Your Committee on Resolutions and Procedure met this morning and con-

sidered resolutions now before the convention as well as necessary rules of order. Your committee submits the attached programme, which contains the resolutions now before the convention. Your committee would recommend that no further resolutions be accepted, and also that should it be decided to arrange for any future convention that the Committee of Arrangements be requested to notify all boards of trade to the effect that no resolution can be accepted after ten days prior to the opening of such convention.

At the session on Thursday, June 16, the convention recommended the formation of good roads organizations on lines similar to the organizations in provinces of the east, to act in conjunction with the Territorial Department of Public Works. They decided to do nothing regarding the exclusion of the United States currency, and to urge on the transportation commission the great importance of improving the navigation of the Saskatchewan River. Mr. Jones, of Golden, was not present to answer to his name, and the resolution on the paper advocating a duty of \$2 per thousand on American lumber coming into Canada did not come up. A resolution was passed urging upon the C.P.R. the need of annual excursion trains east during the Summer months.

In the evening the Calgary Board of Trade tendered a banquet to the visiting delegates, who attended in large numbers. The function was a brilliant one, and the entertainment provided such as to win golden opinions of the city and its people from every guest present.

CURTIS STEAM TURBINE.

The Canadian General Electric Co., Ltd., Toronto, are sending out bulletin No. 834, illustrating and describing in detail the Curtis Steam Turbine, which class of turbine they are beginning to manufacture at their works at Peterborough.

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
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HAMILTON, ONT.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Nordberg Engines.

The D'Olier Engineering Co., Philadelphia, are sending out a bulletin, series G No. 2, illustrating and describing the engine turned out by the Nordberg Mfg Co., Milwaukee, Wis. This bulletin would be of interest to all users of power developing machinery, and readers of *Hardware and Metal* may secure one of them upon application to the D'Olier Engineering Co.

Sight Feed Oil Pumps.

Hardware and Metal has received from the Sight Feed Oil Pump Co., Milwaukee, Wis., a very neat little catalogue, illustrating and describing the Richardson Sight Feed Oil Pump. As an introduction is, "Why Our Oil Pumps are the Best," giving fourteen reasons for so claiming. Then follows the descriptions and illustrations of the different lines of pumps. This catalogue should be of interest to all engineers, and readers of *Hardware and Metal* may secure one of them by writing to the Sight Feed Oil Pump Co., mentioning this paper.

Feed Water Regulators.


The Williams Gauge Co., Pittsburg, Pa., are sending out a catalogue describing the Williams Automatic Safety Feed Water Regulator for steam boilers. The use of a feed water regulator is to increase the efficiency of the boilers by automatically controlling the feeding of the water to the boiler, preserving the proper amount of water continuously in exact proportion to the heating surface. Any thinking of installing one of these regulators would do well to see the catalogue sent out by the Williams Gauge Co.

Acorn Purifier.

T. Linke & Co., 1559 Broadway, New York, are sending out a circular illustrating and describing the Acorn Improved Water Purifier. This circular should be of considerable interest to plumbers and hardwaremen handling plumbers' supplies, since there are some features of this purifier which would be new to them. Readers of *Hardware and Metal* may secure a copy of this circular upon application to T. Linke & Co.

The Pike Mfg Co.

From the Pike Mfg Co., Pike Station, New Hampshire, U.S., *Hardware and Metal* has received a new catalogue and price list showing several additions to their lines of goods. Several new brands of scythe stones have been added, and special prominence is given to the descriptions of the India Oilstone, for which this firm state that they have the sole selling agency. Several new lines of razor hones, knife sharpeners, etc., have been added to the stock, and



Stock up with Berger's Paris Green

Now is the Paris Green season. There is good business and good profits to be had in Paris Green during the next few weeks. The better the green the better the business—a satisfactory green makes satisfied, permanent customers.

Berger's is the Standard Paris Green of Canada—it leads the market. Strongest in poisoning qualities—it kills the bugs by one application—it means crop safety.

We are Canadian agents for **Berger's**. Write us today for prices, etc.

We carry a full stock of all sized packages at our Toronto warehouse and are in position to make quick deliveries from there or from Montreal.



THE SHERWIN-WILLIAMS CO.

PAINT AND VARNISH MAKERS.

Canadian Headquarters & Plant: 21 St. Antoine St., Montreal.
Warehouses: 86 York St., Toronto; 147 Bannatyne St., East, Winnipeg.

are described in this catalogue. The illustrations throughout are clear, and the book is well printed on good paper. As this price list supersedes all former lists of the company, every hardware merchant should write for a copy. Mention this paper.

Pneumatic Tools.

Catalogue E, of the Cleveland Pneumatic Tool Co., deals with pneumatic tools for clipping, caulking, beading and riveting. This catalogue presents a very fine appearance, both inside and outside. The illustrations are excellent, and the typographic execution is in keeping with the rest of the catalogue. Pneumatic tools of special design have been in use for quite a number of years. However, the development in the perfecting of these tools during the last four or five years has made pneumatic tools adjuncts in the machinery equipment of all up-to-date machine shops and factories. Any of the readers of *Hardware and Metal* interested in pneumatic tools may secure a copy of this catalogue by applying to the Cleveland Pneumatic Tool Co., Cincinnati, O.

"Diamond H."

The Canadian General Electric Co., Toronto, are sending out a circular illustrating and describing "Diamond H" push switches, rotary switches, automatic door switches and steel wall appliances. This should be of interest to the readers of *Hardware and Metal* handling electrical supplies, and they may secure one by applying to the Canadian General Electric Co.

Jackson Knife & Shear Co.

The Jackson Knife & Shear Co., Tremont, Ohio, have issued for distribution a catalogue which every Canadian retail hardware dealer should have on hand for reference. This firm's range includes shears and scissors, razors, pocket knives, butcher knives and serrated edge knives. In their introduction they say: "All steel used is imported direct from Sheffield, England. Cutlery steel made in England for the manufacture of cutlery is in every way superior to steel of American make." Mention *Hardware and Metal* when writing this firm.

Business Changes

ONTARIO.

THE assets of A. Albien, general merchant, Glen Robertson, were advertised to be sold by auction on June 20.

G. W. Green, pump manufacturer, Peterboro, has been burned out.

Wm. J. Tremblay, foundryman, Pembroke, has been succeeded by Tremblay Bros.

A. H. Patterson, hardware merchant, Chatham, suffered loss by fire; partially covered by insurance.

A meeting of the creditors of John R. Brown, blacksmith, Madoc, is to take place on the 6th prox.

N. McInnis & Co., general merchants, Tiverton, have been burnt out; loss partially covered by insurance.

The Wilson Macfarlane Co., of Peterboro, dealers in crockery and silverware, have assigned to J. S. McMahon.

A meeting of creditors of the Wilson Macfarlane Co., of Peterboro, dealers in crockery and silverware, was announced for June 24.

Boston Wood Rim Co., Limited, manufacturers of wood rims, interior woodwork, etc., have advertised plant and stock for sale by tender.

McEdward & Moore, of St. Catharines, Ont., who have carried on a successful hardware business for years, have dissolved. Mr. Moore continues in his own name.

QUEBEC.

W. Finn, broom manufacturer, Montreal, is dead.

David & Colas, painters, Montreal, have registered.

F. W. Webb Mfg. Co., Montreal, have dissolved partnership.

Belanger, Wilfred & Cie., masons, Montreal, have registered.

The Empire Elevator Co., Limited, Montreal, are incorporated.

The Matard Piano Mfg. Co., Montreal, Fortunat Matrad registered.

Guillaume, Lemay & Lebrun, moulders, Montreal, have registered.

L'Heureux, Desnoyers & Cie., contractors, Quebec, have registered.

M. Guertin & Cie., contractors, Montreal, have dissolved partnership.

J. Tremblay, general merchant, Tremblay, has affected a compromise.

The assets of Jos. Lambert & Fils., contractors, Montreal, are to be sold.

Mount Bros., electricians, Montreal, have assigned; meeting of creditors 22nd inst.

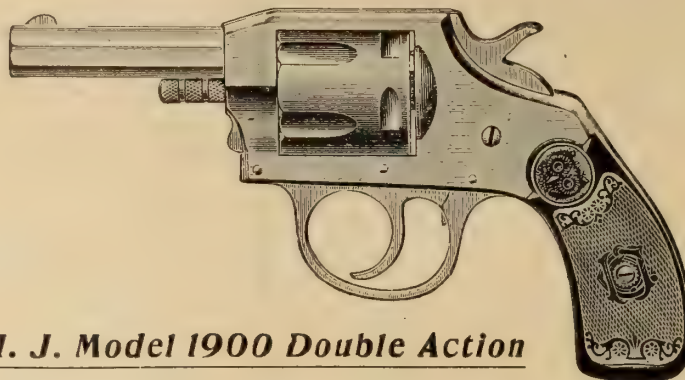
A. Belanger & Cie., general contractors, Montreal, registered Arthur Belanger.

Farnham & Turner, dealers in telephones, etc., Dunham, have dissolved partnership.

Quebec Paper Bag Co., manufacturers of paper bags, Quebec, have offered to compromise.

THE RECOGNIZED

4th OF JULY REVOLVER



I. J. Model 1900 Double Action

The best Revolver for the money in the world. Order of your jobber, and insist upon getting it. Do not allow of substitution. Made by

Iver Johnson's Arms & Cycle Works

MAKERS OF THE FAMOUS

IVER JOHNSON REVOLVERS, GUNS and BICYCLES

NEW YORK OFFICE,

No. 99 Chambers Street.

ARMORIES & GENERAL OFFICES,

Fitchburg, Mass., U. S. A.

Simon Page has registered under the style of the Montreal Automobile Exchange, Montreal.

E. Laliberte, general merchant, Lotbiniere, has settled with his creditors at 100c on the dollar.

E. Villeneuve, general merchant, Jonquiere, has sold his stock to Larouche & Angers, Hebertville.

James A. Young has registered under the style of Andrew Young, engineer and machinist, Montreal, St. Henri.

The consent of assignment of E. C. Mount & Co., plumbers, Montreal, has been filed; meeting of creditors on the 22nd inst.

Hiram L. Pipher Co., Limited, dealers in railway specialties, Montreal, had stock slightly damaged by water; loss covered by insurance.

NOVA SCOTIA.

Terris & Peel, general merchants, Springhill, have registered partnership for H. A. Terris and J. E. Peel, to do business under the above style.

PRINCE EDWARD ISLAND.

W. J. Lidstone, general merchant, Charlottetown, has started in business.

MANITOBA AND N.W.T.

The A. J. Falconer Co., general merchants, Deloraine, have been incorporated.

The Dundurn Trading Co., general merchants, Dundurn, has sold stock to J. E. Dowdle.

Westaway & Skelton, general merchants, Battleford, have sold their stock to Pickle & Johnston.

A. Walker, general merchant, Rokeby, has advertised his business for sale. Rosthern, have dissolved partnership. J. W. Robertson continues.

BRITISH COLUMBIA.

Henry Dawson, builder, Nanaimo, is dead.

McRobie Fire Extinguisher Co., Vancouver, suffered loss by fire.

The Crow's Nest Trading Co., general merchants, Fernie, have offered to compromise.

J. M. Letson, of Letson & Burpee, Limited, manufacturers of machinery, etc., Vancouver, is dead.

MANITOBA AND N.W.T.

B. G. Prior, harnessmaker, Strathclair, has sold out.

Robertson Adams Lumber Co., Crystal City, are incorporated.

The Gibson Lumber Co., Limited, Winnipeg, are incorporated.

The Winnipeg Granite & Marble Co., Winnipeg, are incorporated.

J. L. Lamont, hardware and harness dealer, Whitewood, has sold harness business to I. DeWolfe.

H. S. HOWLAND, SONS & CO.

WHOLESALE
ONLY.

Telephone,
Office Park, 1584.

TEMPORARY WAREHOUSE:

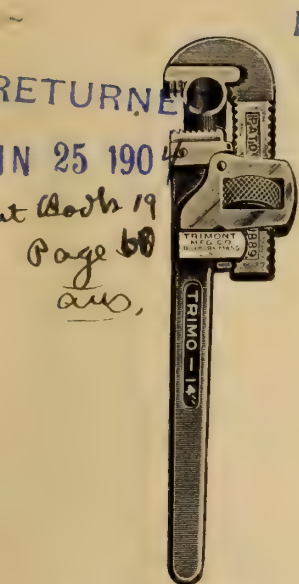
212-218 Cowan Avenue.

SAMPLE ROOM at 21 Scott Street (Telephone)

(where orders may be left if not convenient to visit our warehouse in Parkdale).

LIMITED
ONLY
WHOLESALE.

Telephone,
Warehouse, Park 1585.



"Trimo" Wrench

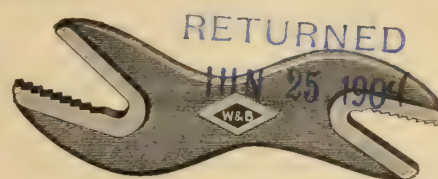


Gas Pipe. Black and Galvanized.

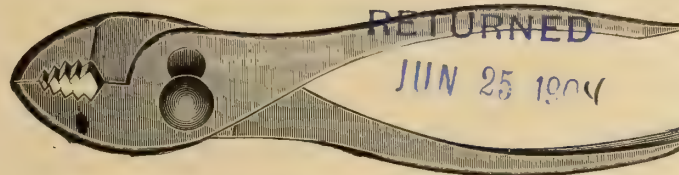
PIPE WRENCHES.



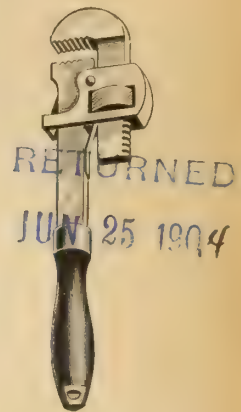
"Bulldog"



Always Ready



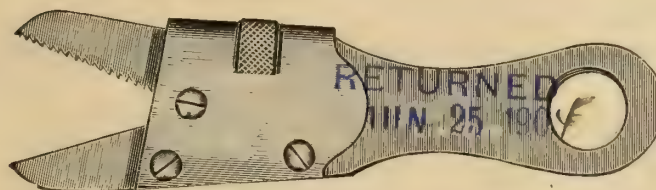
Combination Gas Plier, 6 in. Black and Nickel Plated.



"Stillson's" Wrench
Wood Handle, 6, 8, 10 ins.
Iron " 14, 18, 24 ins.



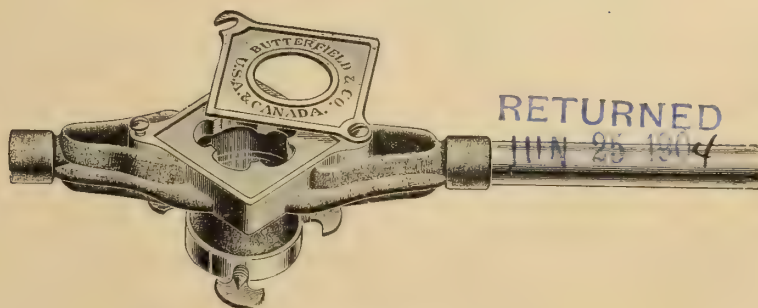
Brown's Pipe Tongs



"Diamond" Full Nickel Plated.



Pipe Cutter



Solid Pipe Dies



Bemis & Call Wrenches
Long Nut

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We Ship Promptly.

GRAHAM NAILS ARE THE BEST.

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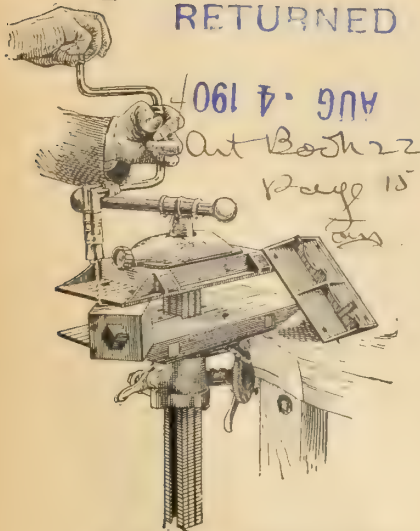
Our prices are right.

TRUE BRAND CUTLERY.**POCKET CUTLERY****GUARANTEED QUALITY.****RAZORS
SCISSORS****BEST GOODS****RIGHT PRICES****E. F. WALTER & CO.,** 166 and 168 McGill St., **Montreal****PARLOR DOOR HANGERS****BARN DOOR HANGERS****FIRE DOOR HANGERS****DOOR HANGERS of Every Description.****VELOX BALL-BEARING GRINDSTONES****VELOX EMERY GRINDERS**

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Wilcox Mfg. Co. of Ontario, Limited
LONDON, ONT.**THE EMMERT VISES**

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— ARE THE STANDARD

Vise holding work to be bored in a vertical position for the sake of accuracy.

EMMERT UNIVERSAL pattern makers' or wood workers' VISES mark the line of a new achievement in mechanical appliances. They have placed the standard of excellence and versatile adaptation so high that they are almost worthy the dignity of classification into a new species of tool. A peculiar characteristic of these Vises is their celerity in jumping about into a great variety of incongruous positions, presenting the work always in an attitude to the workman that he can operate with comfort. This faculty has led one of our patrons to dub **The Emmert Universal Vise** "the acrobat." Not a bad name when comparing it with the fixed or old style vises, for with this vise YOU NEED NEVER TWIST OR BEND YOURSELF TO SUIT YOUR WORK BUT JUST LET THE VISE TURN THE WORK IN ANY DIRECTION AND HOLD IT TO SUIT YOUR COMFORT.

CANADIAN SOLE AGENTS.**SEND FOR CATALOGUE.****THE FAIRBANKS COMPANY****MONTREAL****TORONTO****WINNIPEG****VANCOUVER**

MACHINERY

MACHINERY MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, June 24, 1904.

KEEN competition prevails in machinery business to a much greater extent than in any other lines, and shrewdness and alertness are very necessary adjuncts of the machinery dealer. There is a large business done every week in Canada, and the different machinery men of Montreal seem to come in for a fair share of the moving trade. This week, while business is not at all brisk, there is an average amount being done, and a good many smaller sales are reported. Machine tool supplies are in great demand, and splendid business is being done in that line.

The leading lines sold seem to be woodworking machinery, as has been the case for several weeks past. Mill supplies are also in good demand. Electrical machinery is moving well, but no large installations are reported. Several large deals are under way, but nothing definite in that connection is announced. Shipments are said to be getting rather slow of late, but collections are reported fairly good.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street, East.

Toronto, June 25, 1904.

THERE have been no large deals closed on the local market this week, although there have been one or two large shipments made. Business has not been quite so brisk this week in any lines, in that the number of inquiries has not been great. However, local dealers are not at all troubled, since the depression is thought to be only temporary.

Machinery and Electrical Notes.

The Packard Electric Co., Ltd., St. Catharines, Ont., have established an office in Winnipeg.

The foundation of the engine house of the new water works at St. Boniface, Man., is now well started.

The erection of the new shops for the Canadian Iron & Foundry Co., St. Thomas, Ont. has been commenced.

The new offices of the Guelph Foundry Co., Guelph, Ont., are now nearly completed, and are a credit to the enterprise of the company. The cost of the buildings was \$8,000.

A carload of machinery, consisting of a 45 horse-power, a 9x24 Wheelock engine, a dry-kiln outfit, shafting and hangers, was shipped by the Levy, Weston & McLean Machinery Co., Ltd., Toronto, to the Regina Planing Mill Co., Regina, N.W.T.

The Record Foundry & Machine Co., at Mill Point, near Black's Bridge, Montreal, are enlarging their present foundry, making it two hundred feet long. This is to allow for a greater increase of output to keep up with the increasing demand for the goods manufactured by them.

The City Council of Peterboro has just given a franchise to the Canadian Machine & Telephone Co. to erect poles and string wires necessary for the operation of the system. The rate for business telephones is not to exceed \$20 a year, and \$15 for residences. The franchise is for fifteen years.

At Ottawa the city council has decided to give to the Ottawa Electric Co. a ten-years franchise for lighting the city, and the rate is to be \$52 a year per lamp. This completely sets aside the question which has been before the council for some time regarding a municipal lighting plant.

Eugene F. Phillips, electrical manufacturers, have commenced the erection of new works at Mile End, Montreal. The main building will be three storeys high, 355 feet frontage on St. Charles street and 133 feet on Degaspe street, with a width of 60 feet. Work is being rushed on the mill construction building, which is to be completed first, and is to be equipped with complete sprinkler system.

Several extensions are about to be made to the telegraph and telephone lines in the region of Edmonton, N.W.T.

The most important of these is a new telegraph line to Athabasca. This line will follow the present trail, and will be 108 miles long. From Edmonton a line is to go along the base line to the Indian agency at Stony Plain, a distance of fourteen miles.

New Foundry at Esquimalt.

THE works of the British Columbia Foundry and Engineering Works, Limited, Esquimalt, are now nearing completion. The erection of the buildings has been in progress for some little time past, and now the principal buildings are about completed, and the installation of the plant has commenced. The company's capitalization is \$100,000, and the plant is to be of the most up-to-date type in every respect, and fully capable of carrying out any work that is offered. No expense is being spared to equip the works in the best possible way, and the modern machinery to be used will enable the company to turn out a good class of castings. A new style of crane is being installed in the foundry building capable of lifting weights up to ten ton. This building is 90x50 feet.

The coke oven, nearly completed, is considered by experts to be the finest on the coast. The cupola is in its place and is very strongly made, being capable of withstanding 5,500 degrees of heat, although 3,500 degrees will be the average temperature. A new moulding machine which greatly economizes labor has been installed.

The pattern shop is also about completed. It is a two-storey building, 25 feet by 50 feet, and contains planers, saws, etc.

The plant will be run entirely by electricity, power being secured from Goldstream.

It is expected that the works will be patronized largely by the navy yards, and indeed a number of orders from there have already been booked. Stevens & Hawkins, Victoria, have the contract for supplying the electrical power plant, and the Seabrook Machine Works, Victoria, that for supplying the bulk of the foundry tools.

Care of Steam Boilers.

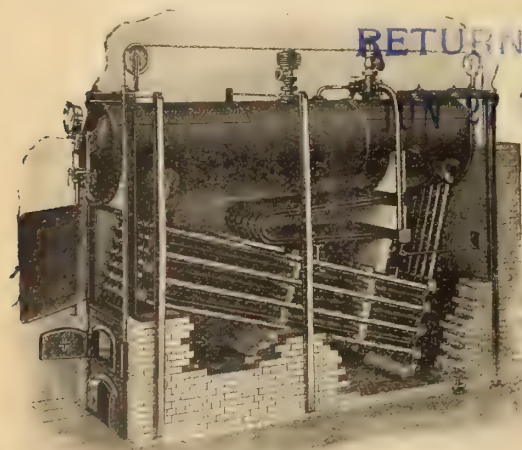
THE first types of boilers used for the generation of steam for mechanical purposes were spherical, and were heated wholly from the outside. With the progress time has brought, and the improvements resulting from years of study and application to the subject, a revolution in the design and efficiency of steam boilers has taken place. The form and construction depend greatly upon the purpose for which they are to be used. They may be divided into six classes, as follows: Plain cylinder boilers, flue boilers, which included the Cornish types, single flue, Lancashire type, two flues, and the Galloway type, breeches flue; multitubular or fire tube boilers, including cylindrical tubular, locomotive and marine boilers; water tube or sectional tube boilers; coil boiler, including the torpedo boat, and other type, and the vertical boiler, which is usually a modified form of some type of the horizontal, but the two main types may be classed as water tube and fire tube. The former is most commonly used in factories and manufactories in Canada, and the internally fired direct fire tube marine, the locomotive type, and the plain horizontal tubular, are also extensively used. Water tube boilers of this type are illustrated by two cuts, representing the Babcock and Wilcox make. They possess the advantage of being quick steaming, not liable to

When the heavy load comes on steam is drawn from these reservoirs.

EFFICIENCY.

The main object in the design of a steam boiler is to provide as large amount of surface as possible, with hot gas on one side and fire on the other. For any given boiler there is a certain rate of combustion, at which it gives its best results, and that result does not vary greatly with different makes of leading styles. They give an efficiency of 65 per cent. to 70 per cent. By efficiency is meant the ratio of the amount of heat given to the boiler to what could be developed if all coal were completely burnt, and all heat utilized. A compromise must be made between the thickness of boiler plate and safety. The thicker the plate the less heat received by the boiler, and therefore the less its efficiency, but the greater the safety and the higher the pressure it will stand. It is not convenient to rate a boiler by horse power, but by the amount of steam generated, and the amount equivalent to a horse power is considered as 30 lbs. per hour. As the efficiency or inefficiency depends on the manner in which the heat is distributed, it may be interesting to note what becomes of the heat generated, and what constitutes the losses. Seventy per cent. of the gases go towards heating and evapor-

ternal or external, and should be carefully guarded against. That, with the formation of scale, forms the two great causes of trouble in boilers. The composition of the feed-water is all important, and this should be analysed frequently. In marine boilers there is no trouble from this source, as surface condensers are used. If the water contains magnesium chloride, at high temperature it is decomposed into magnesium and free hydrochloric acid, which attacks the metal. If calcium carbonate and magnesium chloride are both present they unite and form carbonic acid, which is very injurious. The remedy for this is to make the water alkaling by putting in washing soda to neutralize the acid. Again, air is sometimes deposited on the inside, and causes the metal to become pitted. It should be seen to that the feed pump is working properly, and is pumping water only, and no air with it. Sometimes a film of oil is deposited on a part of the heating surface of the boiler, and being a bad conductor the metal cannot be cooled so easily at this point, and the



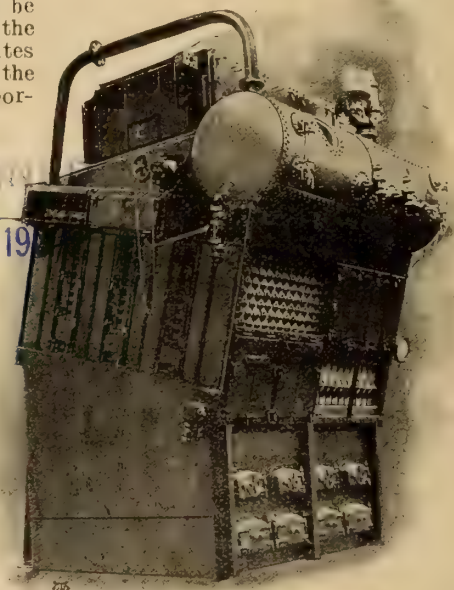
Latest type of Babcock & Wilcox water tube steam boiler, fitted with superheater.

destructive explosions, and are easily repaired, and conveyed in sections. Their capacity for water and steam is hardly as great as that of other types, and they cannot, therefore, stand as great fluctuations of load, but this drawback is more than offset by the advantages, so that they are very largely used. Opposed to the method of quick steaming boilers, which have been so universally adopted, is the steam called thermal storage. This consists in using boilers having only a capacity sufficient for the average load, these being run continuously day and night. At time of light load the steam is admitted through pipes to large iron reservoirs of cheap construction, in which it heats a large quantity of water to a high temperature.

ating the water, and by using economisers the efficiency may be increased 4 per cent. to 6 per cent. Considerable heat is wasted by warming up the furnace gases, the air entering at a low temperature and leaving it at a high. About 16 per cent. of the total heat developed by the consumption of coal thus goes up the chimney. A further portion of heat is used in evaporating the moisture in the coil. Heat is lost by radiation. When a grate is cleaned hot clinkers are taken out, making further losses. Losses due to imperfect combustion of coal amount to 1 per cent., and unaccounted losses to about 5 per cent.

DURABILITY.

Corrosion is the most damaging thing that happens to a boiler, whether in-



Babcock & Wilcox patent water tube, main boiler.

pipe or plates are apt to become overheated and warped. To overcome this, the water may be filtered through a blanket or coarse turkish towel, or it may be allowed to stand in a tank until the oil collects at the surface, when it may be removed. Formerly animal and vegetable oils were used, and they were very injurious, as they were decomposed into fatty acids and iron stearate, but now the oils used are mostly mineral, and this trouble is not frequent. Galvanic action also causes corrosion. To prevent this zinc slabs are placed on the inside, and the zinc is eaten away and not the metal of the boiler. Rust on the outside very often occurs, and the main cause of this is dampness, either due to wet ashes being allowed to rest next the metal of the boiler, which eat

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Don't Forget the Name...
**NEWMAN'S INVINCIBLE
FLOOR SPRINGS**

Strong, Quick, Reliable, Effective.

Will close a door against any pressure of wind. Far ahead of ordinary door springs, pneumatic or otherwise. Ask your wholesaler.

W. NEWMAN & SONS, Birmingham.

IT WILL PAY YOU



to stock the best globe valves "made in Canada."

KERR'S are made of the best steam metal, accurately fitted and perfectly tight.

CATALOGUE FOR THE ASKING.

THE KERR ENGINE CO.,
WALKERVILLE, ONT. Limited

SPECIFY



INJECTORS

PENBERTHY INJECTOR CO.,

LIMITED.

BRASS MFRS.

Windsor, Ont.

Buy the Best.



HERCULES

Sash Cord.

Star Brand Cotton Rope
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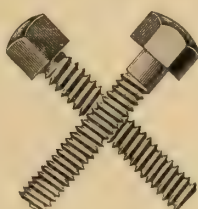
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Then Emery is no Better
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If the United States Government be right when it states that emery is a mechanical admixture of iron ore and corundum (Bulletin No. 180, Department of Interior), then you must agree that the above deduction is logical.

To use iron ore for polishing or grinding iron or steel would be absurd; then why use iron ore and corundum (emery) when you can obtain the pure abrasive—

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TORONTO, CANADA.

it away very rapidly, or to a leaking valve, which causes a drip and wets a certain place, immediately starting it to rust. The remedy for this is to keep all joints and valves water-tight. In brief, three things should be particularly noticed in keeping a boiler from deteriorating. They are, the purification of the feed water; having the water slightly alkaline, and keeping the boiler clean. If a boiler is not in use, it should be empty and perfectly dry, which condition may be maintained by having the boiler closed tightly and a quantity of quick lime inside, or by having it full and free of air, which may be done by heating slowly to drive off the air, and then closing perfectly tight.

MANAGEMENT.

The main object of the boiler attendant should be to maintain a steady pressure of steam, combined with a uniform level at the gauge glass. One of the worst things a boiler suffers from, due to mismanagement, is a strain from unequal expansion. If any part of a boiler is heated to a higher temperature than another, the hotter part will expand more. This unequal expansion sets up enormous stresses, and if it were not for the fact that the metal is elastic rupture would take place. This is due to bad circulation, aggravated by forcing

or clack valves, when they can be regulated, should be so adjusted that the amount of feed is as regular and uniform as possible. The opening of the steam stop valve is something that does not always receive proper attention. The valve should be open the slightest degree after all drain cocks are open and free. When steam and water issues from the drain cock the valve may be opened a little more, and not until steam alone is coming from the cock should the valve be opened to its full extent. A valve should never be closed tightly when the boiler is cold, since on warming up it may be impossible to open it. In case the water level falls too low in the boiler, the fire should be immediately covered with ashes, wet if possible, or earth, if nothing else is handy. Fresh coal may be used, great care being taken, however, to put on a sufficient amount to deaden, and not to increase the fire. The fire should be drawn as soon as it is possible to do so, without increasing the heat. The feed water should not be turned on, the engine started or stopped, or the safety valve lifted until the fires are out and the boiler cooled down.

In the firing of a boiler the prevention of smoke is worthy of consideration, and one of the best ways is to use coal that is not liable to its production, com-

smoke is the fact that the gases that are evolved come in contact with comparatively cool surfaces, preventing their ignition. Firing a little coal at a time, and often, is the only way to prevent smoke. Mechanical stokers have been introduced, which are very successful in this respect. These stokers mean economy in firing, as they do away with the services of manual stoking. An illustration is given of a Jones' underfeed mechanical stoker, showing the method of operation.

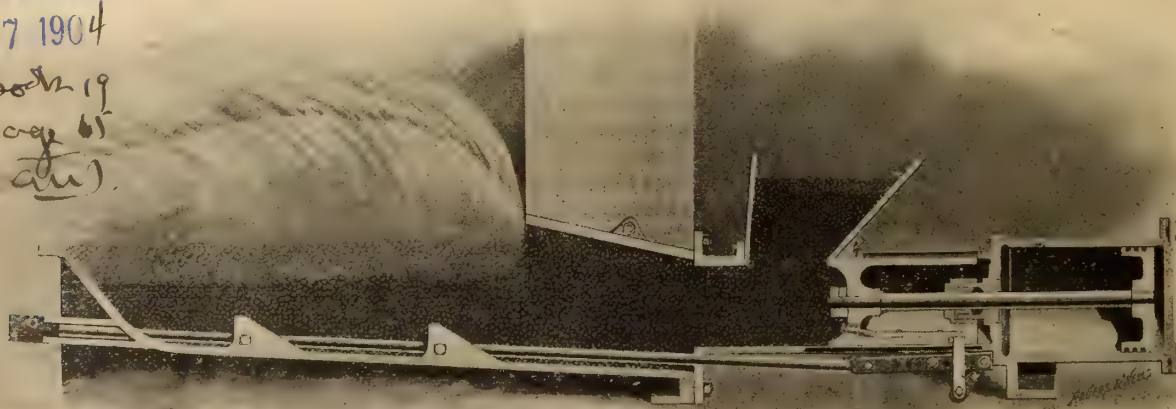
INSPECTION.

In inspecting a boiler first go over the outside of the boiler, and the inside of the fire-box before it is clean, and if there is a leak it is shown by a white or reddish stain; then open the boiler and look inside. All scales should be removed, the fire box cleaned, and the boiler washed down inside. One must be on the lookout for any signs of corrosion both inside and outside, and in the case of a doubtful plate a hole should be drilled in it. It is also necessary to be on the lookout for cracks, or pitting, or grooving, this latter being the tendency of the plates to bend slightly at the joints. The action is only microscopic, but the metal subjected to continual slight bending, corrodes and cracks slightly. See if nuts and stays

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Jones' underfeed mechanical stoker.

the boiler when first raising steam. If possible in raising steam, the boiler should always be given time. In making note of the water level, the glass gauges should not be relied upon entirely, but the gauge cocks should be tried, because the passages in glass gauges are apt to become clogged and give a false indication of the height of the water, which might be lower or higher than in the glass tube. The pressure gauge is another very important fitting that requires careful attention. It should be absolutely accurate, and if there is the slightest doubt about it, it should be compared with the standard gauge. The pointer should read zero at no pressure, and should not press against the stop pin at that mark. The safety valves should be kept in order, and should be tried at least once every day to see that they act freely. The feed check valve,

combined with proper firing. The condition most favorable to the production of smoke is the placing on the fire, reduced to a glowing mass, of a large charge of green coal. The coal immediately gets warm and gives off gas before it is heated enough to burn. These gases are largely hydro-carbons. They decompose and cause smoke, and in passing off mean great loss. Sufficient air should be supplied to allow complete combustion. The air and gas which distils from the coal must be thoroughly mixed, and the temperature should be kept high. When more air is required, if fresh coal is supplied, the resistance is increased and less air can enter from the bottom of the grate, which causes smoke. By forced draught a blast of air may be increased just at the time when more air is needed. Another condition favorable to the formation of

are all right, and see if any plates have bulged at all. See if any previous repairs have been made, and make sure that they are in good order, then give a hydraulic test by pumping water into it. A boiler should be tested to a hundred lbs. or more than working pressure, but this is governed by local by-laws and underwriters' by-laws. Lastly, raise steam and see if safety valves are all right; try blow-off valves, water gauges, feed checks, etc.

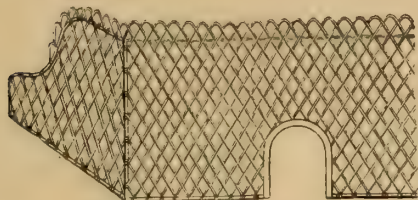
TESTING.

Tests of steam boilers are made to determine the quantity and quality of steam that they supply, the weight of fuel required to produce a certain amount of steam, and other similar facts. A boiler test requires considerable knowledge, care and skill as well as

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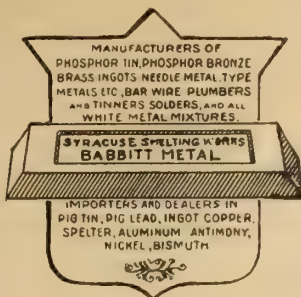
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WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.



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Latest Catalogue will be sent in exchange for your business card.

accurate apparatus. The principal points to be ascertained and noted in a boiler test are: First, the type and dimensions of the boiler, including the area of heating surface, steam and water space, area of water surface and draught area through or between tubes or flues; second, the kind and size of furnace, the area of the grate, with proportion of air spaces in it, type and size of chimneys, length and area of flues; third, kind and quality of fuel, and amount of ash and water therein, this latter being a more important item than is generally understood, as it not only adds to the weight without increasing the value of the fuel, but the heat taken to evaporate and send the steam up the chimney in a highly superheated condition adds to the unobserved waste; fourth, temperatures of external air of fireroom, of chimney gases, of fuel, of water, and of steam; fifth, pressure of steam, of barometer, of draught in chimney; sixth, the weights of feed water, of fuel, and of ashes; seventh, time of starting and of stopping test, taking care that the observed conditions are the same at each as far as possible; eighth, the quality of the steam, whether wet, dry, or superheated. From these data, all the results can be calculated, giving the economy and capacity of the boiler, and the sufficiency or insufficiency of the conditions for obtaining the best results.

The amount of water evaporated per pound of coal is universally conceded to be the proper measure of the efficiency of a boiler, but in order to compare one boiler with another, each should have equally good coal, be fed with water at the same temperature, and furnish steam at the same pressure. As this is impracticable in testing, a standard has been accepted, to which all tests should be brought for comparison. This is called the "equivalent evaporation, from and at 212 degrees" per pound of combustible. That is what the evaporation would have been if the coal had been without ash, the feed water at boiling point, and the steam delivered at atmospheric pressure. It may be determined by the following formula:

Let W = the observed evaporation per lb. of combustible.

t = the observed temperature of feed.

T = the temperature of steam at observed pressure.

H = the total heat of steam at the observed pressure.

W' = the equivalent evaporation from and at 212 degrees, then

$$W' = W \left(1 + \frac{0.3 (T - 212) + (212 - t)}{966} \right).$$

$$\text{or, } W' = W \times \left(\frac{H + 32 - t}{966} \right).$$

The value of T and H may be found by reference to a steam table.

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WANTED—Foot lathe; describe and state lowest price. Box M 31, **HARDWARE AND METAL**, Toronto.

WANTED—30 to 40 h.p. high speed engine; in good order. Apply M 32, **HARDWARE AND METAL**, Toronto.

WANTED—A small second-hand nickel-plating outfit; state price and particulars to Drawer O, Renfrew, Ont.

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WANTED—Second-hand water motor—not less than 1½ horsepower or more than 2 horsepower; water pressure 45 lbs. Apply to Box 184, Cornwall, Ont.

WANTED—36 x 36 in. x 10 ft. planer; 16 ft. lathe, 24 in. swing; and No. 500 belt drivers' drop hammer. Address Box M 145, **HARDWARE AND METAL**, Toronto.

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ENGINE LATHE—Swings 17 in. over shears, takes 4 ft. between centres; good order; cheap for cash. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

FOR SALE—Brown automatic engine—cylinder size, 17 by 36; been used very short time. Toronto Carpet Manufacturing Company, Limited.

PUG Mills—All iron and steel; kiln doors in four sizes; bands, grates and a full line of brickyard supplies. Address H. C. Baird & Son, Parkhill, Ont.

ROCK DRILLS—For water works, excavating, quarries and mines; steam hoists for builders, mines and quarries; simple, compound and triple marine engines for pleasure launches. The Dominion Rock Drill Co., Napanee.

STEAM and gasoline engine, boilers, grist, feed mill and elevator machinery. Wm. B. Lewis, r-A Garry court, Winnipeg.

THE STUART MACHINERY CO., Winnipeg—Two hand-power freight elevators in good shape, cheap; one new 100 h.p. horizontal return tubular boiler, with full flush and all mountings; can ship immediately; one new 40 h.p. locomotive portable boiler; can ship immediately.

I 24" pony planer and 1 pedestal spindle carving machine, with countershafts. Apply Box M 33, **HARDWARE AND METAL**, Toronto.

HOISTING ENGINES, derricks, continuous concrete mixers, 250 yards capacity; dump cars, railway construction cars, track-laying tools, boilers, etc. Marsh & Henthorn, Belleville, Ont.

IRON PLANER—24 in. x 24 in. x 6 ft., second-hand in first-class condition, for sale; a quick turn over. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

NEW STATIONARY ENGINES—20 x 24 Waterous sawmill engine; 14 x 18 Waterous sawmill engine; 9 x 10 McEwen engine; 13 x 14 McEwen engine. Waterous, Brantford.

THE FAIRBANKS CO.—Temporary warehouse, 124 Bay—standard scales, valves, trucks, letter presses, shafting, hangers, pulleys belting, mill supplies, machine tools; "Fairbanks" gas and gasoline engines; write for price list.

ROCK DRILLS for waterworks excavating, quarries and mines; steam hoists for builders, mines and quarries; simple, compound and triple marine engines, for pleasure launches. The Dominion Rock Drill Co., Napanee, Ont.

A RARE OPPORTUNITY.

The undersigned is prepared to receive sealed tenders up to the 30th day of June, 1904, for the buildings, machinery, stock, etc., of the Alexandria Wood Export Company, Limited. The buildings are practically new and the machinery of the most modern type. The property can be easily changed from its original purpose to a furniture or waggon factory. It is situated in one of the most central and thriving towns in Ontario. As an evidence of the business done in the town, one of its factories has an output of about five thousand carriages annually.

The highest or any tender not necessarily accepted.

ANGUS McDONALD, Assignee.

Alexandria, May 14, 1904.

(26)

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FIRST-CLASS stove plate moulders and mounters; steady work the year around, with highest wages. The Western Foundry Co., Limited, Wingham, Ont.

ONE first-class iron planer hand; must be A1 man; also a first-class man to operate 42" Bullard boring mill. Apply, stating experience, Vancouver Engineering Works, Limited, Vancouver, B.C.

THE services of a mechanical engineer; competent to take charge of steam electric plant; references required. Drawer 713, Brockville, Ont.

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You will study your own interest by stating specifically that you require the "C" Brand, and accept no substitute brands, especially if sold at the same price.

We find there are some dealers, who, unless they receive specific instructions for the "C" Brand, will substitute others, on which they make a larger profit. This method is unfair, both to the purchaser and to ourselves. If the purchaser of Horse Nails pays the same price for any other Brand of Nails that he would for the "C" Brand he is paying too much, as no other Horse Nails made in Canada are sold by the makers at the same price. The Manufacturers of all other brands made in Canada, judged by their lower prices, do not value their Horse Nails to be equal to the "C" Brand—and they are right.

You cannot make Nails equal to the "C" Brand, except in the same way they are made, and out of the same material. There are no works in Canada that use the same quality of material as is used by us in the manufacture of our Nails. It is made especially for us in Sweden, and represents the highest grade obtainable of Swedish Siemens-Martin Charcoal Steel Nail Rods. This is the best material known in the world, or used by any manufacturer, for the purpose of making Horse Nails.

Our nails are hot forged from the rod, and pointed and finished by a process used exclusively at our works. By reason of their superior designs and hardened needle points, they will drive into the hardest hoof easily and clinch perfectly. They will hold the shoes on longer than any other, and stand the hardest usage to which horse nails are subjected. These facts are admitted and proved by the experience of thousands of Farriers from the Atlantic to the Pacific. It follows that as they are the best, they are the cheapest to buy and use.

Any intelligent Farrier knows perfectly, that upon the quality of the nails used, the reputation and permanence of his work depends; he will, when the facts are fairly presented, use the best if he can get them.

Tell him also that for every 25c. a box less he pays for cheaper brands, that on the average size and quantity used in shoeing a horse ($\frac{1}{2}$ lb. of No. 8) it only reduces the cost of the nails used in shoeing a horse one third of a cent. There is no Farrier but can afford to use the best nails in view of this small difference in cost.

We respectfully request every purchaser of Horse Nails, who is not already a buyer of the "C" Brand, to give them a thorough trial, and test their merits thoroughly, and we feel satisfied that the results will prove all that we claim for them.

We have been making Horse Nails in Canada since 1865, and our experience of 39 years is embodied in every box of nails bearing the "C" Brand and our name. You are sure of getting the best "made in Canada."

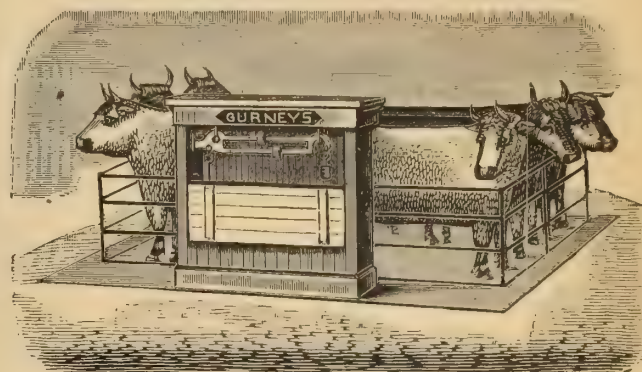
Your preference for our "C" Brand in ordering is respectfully requested.

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The Widening Use of Electric Welding.

THE electric weld is becoming a more and more important factor in many industries. During recent years the extension of its application has been steady, and each year has witnessed its entrance into new fields. Sometimes, indeed, new manufactures, or new ways of obtaining results, have been based upon its use. The electric welds under consideration are the results of that operation of uniting two pieces of metal by what is known as the Thomson process, first brought out by the writer and rendered available in commercial practice a considerable number of years ago. The rapidity, flexibility, cleanliness, neatness, accuracy and economy of the electric process has won for it such an important standing in the arts that many future extensions in its application are assured, writes Elihu Thomson, in the "Electric Power Number" of Cassier's Magazine.

The uniformity of the work, the control of the operation, the extreme localization of the heat to the particular parts to be united, and the fact that the process is not limited to iron and steel, but can deal equally well with other metals, such as copper, brass, bronzes, and even lead, are characteristics of the electric welding operation.

In the wagon and carriage industry the process is applied in the production of tires of all sections, axles, hub, spoke and sand bands, fifth wheels, shifting rails, steps, shaft iron, etc., while it has found a large use in the welding into continuous strips or bands of the wires inclosed in rubber tires for holding them in place. The larger part of the dash-frames used in carriages in the United States are now probably made by electric welding, while iron and steel agricultural wheels are built up, or have their parts united, by electric welds.

To enumerate the many applications to the bicycle industry would be almost to catalogue most of the metal parts of this useful machine. It must be borne in mind, too, that a welding machine, slightly modified, is equally applicable for locally heating parts in electric

brazing or hard soldering, for upsetting, and for bending or shaping.

In the wire industry the part played by electric welding is already quite important, and becomes steadily more so. Besides the mere simple joining of wires or iron, steel or copper into long lengths, the welding of wire or strip into hoops for barrels, tubs, pails, etc., is supplanting the older forms. Numerous machines are in operation turning out electrically welded wire fence, much as a loom turns out cloth.

Meridian Lamps.

THE attention of the hardware trade is here called to a new electric light put upon the market by the Canadian General Electric Co., Toronto. The accompanying illustration

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No. 1 Meridian Lamp (half size).

gives a good idea of the kind of lamp it is. The Meridian lamp, as it has been designated, is an incandescent lamp, with a suitable reflector and ornamental holder, detachable from the lamp. The lamp filament is of special shape, designed to throw as much light as possible downward. The lamp is enclosed in a sand-blasted globe, and thus the light is soft, brilliant and white. The improved shape of the filament, together with the special design of the reflector, gives a very uniform diffusion of light.

This lamp is as simple as an ordinary incandescent lamp, and is as complete in itself, requiring no adjustment or attention. The bulb of the lamp can be renewed as simply as the ordinary incandescent lamp-bulb, and the other parts of the lamp, such as the reflector, are very simple.

The No. 2 lamp, a larger size that the one illustrated, has an efficiency of a 50 c. p. lamp. The lamp uses 120 watts, so that gives an efficiency of 2 watts per candle power.

The Meridian lamp can be used on either alternating or continuous current circuits, and has the same life on either. On alternating current circuits it is adapted to all commercial frequencies. It is designed for use at the usual standard voltage, and thus the necessity of using special voltages is avoided. The lamp fits in standard sockets and requires no special connections. Taking these conditions into consideration, there need be no difficulty to the hardwareman in handling this lamp.

This lamp is designed for interior illumination, such as is required in residences, hotels, office buildings, libraries, studios, drafting rooms and factories. It is specially suited for low ceilings and window lighting.

The Canadian General Electric Co. are sending out catalogue No. 831 illustrating and describing this lamp in detail, and also giving some general notes on inside illuminating. Any readers of Hardware and Metal wishing further information regarding the style of the lamp or regarding the price, can secure a copy of the catalogue from them.

The Electricians' Convention.

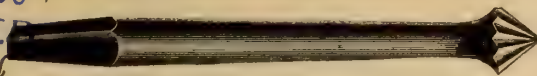
THE convention of the Canadian Electrical Association was this year held in Hamilton during several days of last week, at the Royal Hotel. To those who attended the convention was both interesting and instructive. It was instructive in that many papers on subjects of interest to electricians were read and discussed at the various sessions; and it was in-

Countersink, Turnscrew, Centre, Gimlet Bits, Etc.

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interesting, not only because of the valuable information obtained, but also because of its many other features. Among these features were the banquet on the evening of June 17 at the Hotel Royal, the visit to the plant of the Hamilton Cataract Power, Light and Traction Co., at De Cew Falls, and the visit to Niagara Falls, where the many works of interest to electricians were examined.

The following officers were chosen by the association:

President—K. B. Thornton, Montreal.

1st Vice-Pres.—A. A. Wright, M.P., Renfrew.

2nd Vice-Pres.—R. G. Black, Toronto.

Secretary—C. H. Mortimer, Toronto.

Executive Committee—A. B. Smith, Toronto; A. A. Dion, Ottawa; B. F. Reeson, Lindsay; J. G. Kammerer, Toronto; Gordon J. Henderson, Hamilton; C. B. Hunt, London; F. Thompson, Montreal; J. J. Wright, Toronto; John Murphy, Ottawa; A. E. Evans, Quebec City.

The convention will meet in Montreal next year.

The value of these conventions cannot be over-estimated. The reading and discussing of technical articles is a very important feature, because of the new and up-to-date ideas that are brought out thereby. Nothing is of more importance than the interchanging of ideas and experiences for the individual attendant of these conventions. He cannot fail to have his opinions broadened and, if only for that very fact, he is a better electrician after than he was before the convention.

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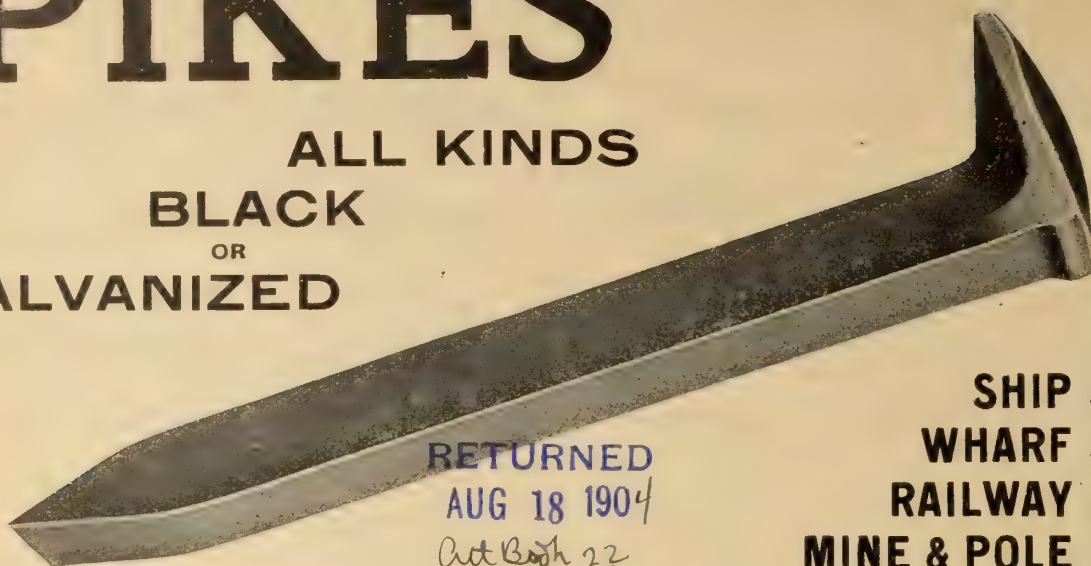
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WHARF SPIKES

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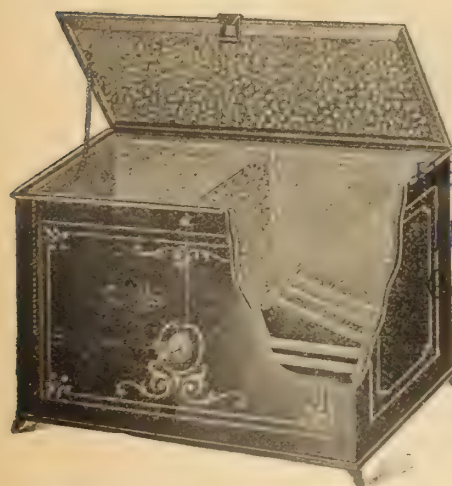
Works: Lachine Canal.

MONTREAL.

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and

Utensils



Japanned Ice Chest



Summer Queen Oil Stove

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Ice Chests. Wick and Wickless Oil Stoves. Everything for the Camper.

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AN AMBIGUOUS TARIFF CLAUSE.

THE fastidious tradesman, with a liberal share of political prejudice, has at last found something "agin the Government," namely, a clause in the revised tariff regulations which may be variously interpreted.

Item 185 in the new tariff resolution fixes the duty on "tableware of china, porcelain or other clay" of British manufacture imported into Canada at 15 per cent. ad valorem. This means that certain English china, porcelain, etc., is to be given an additional preference of 5 per cent.

As a matter of fact, the customs authorities in Toronto and Montreal have interpreted the "tableware of china," etc., quite differently. In Toronto, the whole of china, porcelain, crockery, etc., manufactured in Great Britain is given the benefit of the additional preference. In Montreal the customs authorities are exacting the original duty of 20 per cent. on such articles of British manu-

facture as toilet sets, china novelties, flower pots, etc., while they interpret the clause in the new tariff regulations literally, and allow the additional preference to "tableware of china" only.

Those directly interested in Toronto and Montreal have written to the Department at Ottawa on the subject, but have received in reply only the useless information that it is perfectly clear what is meant by "tableware of china," and that they must exercise their own judgment. Meanwhile dealers in Montreal feel that a uniform tariff should apply without discrimination in favor of any particular port of entry. One Toronto dealer thinks there is no possible sense in discriminating between tableware and toiletware; that the Government authorities never intended but that the new tariff should include all china of British manufacture, and that the ambiguity of the term "tableware of china" is nothing more or less than an oversight. Montreal china and crockery dealers feel that the interpretation of the new regulation, according to the customs authorities there, is going to involve a lot of labor and unnecessary inconvenience, in separating tableware, crockery, toiletware, novelties, etc., and are striving to have an interpretation placed on the fatal clause which will be inclusive instead of exclusive.

The general impression seems to be that the last stage of a tariff which requires to be interpreted before it can be understood is not much better than the first, and that the wording of the clause in question ought to be freed from possible misinterpretation if the trade is to know where it's at.

WESTERN BOARD OF TRADE CONVENTION.

THE latest stage in the flood-tide of western commercial and industrial development is marked by the inauguration of a board of trade convention of the Northwest Territories, which held its initial meeting in Calgary, Alta., on June 15-16.

Over a year ago the Calgary Board of Trade sent a letter to the various

boards of trade in the Territories, inviting expressions of opinion as to the feasibility of holding a convention of delegates from such bodies at a central point in the west. The proposal met with general approbation, and as a direct result Calgary was suggested as a suitable place for the first convention. The Calgary Board of Trade immediately took upon itself the responsibility of calling the convention, which has just closed with a large attendance of representative business men from all sections of the Territories as far east as Winnipeg, and as far west as Nelson, B. C.

What far-reaching influences this gathering may have is difficult to determine. In the first place, however, it augurs for a stronger bond of sympathy and fellowship between western business men, in whose hands lies so largely the shaping of the future of western Canada. At the same time it is a simple and most efficient means of unifying and solidifying the individual commercial interests of the west into a general aggressive national policy.

The sentimental and commercial aspects of such a convention are equally significant, and it may almost be taken for granted that once the right atmosphere has been created by representative business men actually engaged in trade and commerce coming together at frequent intervals to discuss financial, agricultural and industrial problems with which they are actually confronted, the road is a short and direct one to the firm establishment of a sound commercial national life.

The present activity in western business circles is a matter over which every Canadian should be proud, and the Western Board of Trade Convention, although a big stride in the right direction, may be taken only as an indication of the bright future in store for western Canada.

TECHNICAL BOOKS.

HARDWARE AND METAL, recognizing the need in Canada of standard works on technical subjects, has for some time been in correspondence with several of the leading publishing houses in the United States and

Great Britain, to secure their agency in Canada for such books.

In another column will be found a list of books which can now be procured through Hardware and Metal, though final arrangements for their sale in Canada are not yet complete. The books in the list given are published by the David Williams Co., New York, proprietors of the Iron Age and the Metal Worker, the best trade papers in their respective fields in the United States. Anything sent out by this firm can be absolutely relied upon as authentic and up-to-date, and Hardware and Metal, in offering these books to the Canadian trade at net prices, considers that it is doing a distinct service to the trade.

TRANSPORTATION FACILITIES.

THE arrival of the new steamboat Turbinia, to run between Toronto and Hamilton, marks a new era in steamboat propulsion in Canada. She is the fourth turbine boat to cross the Atlantic, and the first to be used for commercial purposes in America. Canada's progressiveness is well illustrated by this step, which shows clearly how fully alive are our business men to existing possibilities, and to the ready adoption of the latest achievements of science to further business pursuits.

At all times when countries, districts, or cities have been striving for commercial supremacy, and increased industrial achievement, the question of transportation has been a vital one. Anything going to further this end either in speed or economy of handling has always been hailed with delight by the business community, and looked upon as a boon to the commercial world. Steam turbines for the motive power of boats have passed the experimental stage, and possess many advantages over the steam engine for that purpose. While the high speed possible by their use is the most important factor, it is by no means the only one. The former are lighter, occupy less space, and can be built at a lower cost than a reciprocating steam engine. Another point that is all important to the traveling public is the fact that the vibration attendant upon the use of the steam engine is entirely done away with, and no

distressing thump thump is felt. It has been said that this means the death knell of the steam engine in large units, and what has been done so far in this direction would seem that such is the case. However that may be, it seems assured that steam turbines are destined to play an important part in the world's progress.

The future of this boat will be watched with great interest, and its successful operation will no doubt have a material effect on the navigation of our lakes and rivers.

RAILWAY COMMISSION MEETS.

THE Federal Railway Commission, in session this week in Toronto for the purpose of listening to complaints and making readjustments in freight charges and claims against the various railways in this section of the country, will meet with the approval of all who recognize the necessity of a safeguard in the way of Government supervision of enterprises which enjoy the distinction of being practical monopolies. The trade of a country is very largely in the hands of the railways which pass through it, and on different occasions in the past it has been evident that Canadian railways have taken advantage of their position to further their own interests at the expense of the interests of the public.

One of the chief items considered was the complaint of several manufacturers, on the ground of unjust discrimination in freight rates. For instance, the freight rate from Wallaceburg, Ont., to Winnipeg is 65c, while that from Hamburg, Germany, to Winnipeg is only 72c. From Detroit to Toronto, a distance of 228 miles, the rate is 13c, but from Wallaceburg to Toronto, a distance of 199 miles, it is 18c. This grievance is one of long standing, and it is hoped the railway commission will be able to do something towards the removal of a manifest injustice to trade in Canada. It is anomalous, to say the least, that the cost of shipping goods from Canada to England and back to Manitoba should differ very little from that of shipping direct to the West.

ONTARIO'S BUSINESS TAX.

Text of the New Law.

RESPECTIVE of any assessment of land under this Act, in cities, towns and villages, every person occupying or using land in the municipality for the purpose of any business mentioned or described in this section shall be assessed for a sum to be called "business assessment" to be computed by reference to the assessed value of the land so occupied or used by him, as follows:

- (a) Every person carrying on the business of a distiller for a sum equal to 125 per cent. of the said assessed value.
- (b) Every person carrying on the business of a brewer for a sum equal to the said assessed value.
- (c) Every person carrying on the business of a wholesale merchant, of an insurance company, a loan company, or a trust company, as defined by this Act, or of an express company where such land is pre-occupied or used mainly for the purposes of its business, or a land company or of a bank or a banker, or of any other financial business for a sum equal to 75 per cent. of the said assessed value.
- (d) Every person carrying on the business of what is known as a departmental store or of a retail merchant dealing in more than five branches of retail trade or business in the same premises or in separate departments of premises under one roof, or in connected premises, where the assessed value of the premises exceeds \$20,000, or of a manufacturer, lithographer, printer or publisher, or of a hotel or club, or the business of selling, bartering, or trafficking in fermented, spirituous or other liquors in any premises in respect of which a tavern or shop license has been granted, for a sum equal to 50 per cent. of the said assessed value.
- (e) Every person practising or carrying on business as a barrister, solicitor, notary public, conveyancer, physician, surgeon, oculist, aurist, medical electrician, dentist, veterinarian, civil or mining or consulting or mechanical or electrical engineer, surveyor or architect for a sum equal to 50 per cent. of the said assessed value.
- (f) Every person carrying on the business of a retail merchant, or of a photographer, or of a theatre concert hall, curling or skating rink, or other place of amusement, or of a boarding stable, or a livery or the letting of vehicles or other property for hire, or of a restaurant, eating house, or other house of public entertainment (not being premises in respect of which a tavern or shop license has been granted), or any trade or commercial business

not before in this section or in clause (g) specially mentioned, for a sum equal to 25 per cent. of the said assessed value.

- (g) Every person carrying on the business of a telegraph or telephone company, or of a tramway or street railway, or of the transmission of oil or water, or of steam, heat, gas or electricity for the purposes of light, heat, or power, for a sum equal to 25 per cent. of the assessed value of the land (not being a highway, road, street, lane, or public place or water), occupied by such person, exclusive of the value of any machinery, plant or appliances erected or placed upon, in, over, under or affixed to such land.

No person shall be assessed in respect of the same premises under more than one of the clauses of sub-section 1, and where any person carries on more than one of the kinds of business mentioned in that sub-section on the same premises, he shall be assessed by reference to the assessed value of the whole of the premises under that one of the said clauses in which is included the kind of business of those so carried on by him to which the highest rate of assessment is applicable.

Where the amount of the assessment of any person assessable under this section would under the foregoing provisions be less than \$100, he shall be assessed for the sum of \$100.

Where any person mentioned in subsection 1 occupies or uses land partly for the purpose of his business and partly for the purpose of a residence, he shall be assessed in respect of the part occupied for the purpose of his business only; but this provision shall not apply to persons assessed under clause (e) of subsection 1.

A financial or commercial business, in subsection 1 mentioned, shall not include a business carried on by operating vessel property of the following description, namely, steamboats, sailing or other vessels, tow barges or tugs; nor the business of a steam railway; nor the business of a broker or financial agent, or of a manufacturer's agent, or other agent or intermediary in the business of the sale of goods who has not the actual custody of the goods, or has the custody of samples only.

Every person liable to assessment in respect of a business under subsection 1 shall not be subject to assessment in respect of income derived from such business.

Every person assessed for business assessment shall be personally liable for the payment of the tax thereon and the same shall not constitute a charge upon the land occupied or used.

THE LATE MR. A. B. LEE.

MR. ARTHUR B. LEE, who for the last twenty-five years has been president of Rice Lewis & Son, Limited, died at his home in Toronto on Wednesday, after an illness of several years.

The late Mr. Lee was born in Toronto in 1838, and at the age of eighteen he entered the employ of Rice Lewis & Son. Eleven years later his ability and industry were recognized by his admission into partnership. A large measure of the steady progress of the firm, of the widening of its connection, has ever been credited to Mr. Lee, and when, in 1889, the company was organized as a joint stock concern, he was elected president. The subsequent development of the company into one of the strongest

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The late A. B. Lee.

commercial concerns in Canada is well known to readers of this paper.

While ever a keen, shrewd business man, Mr. Lee was a thorough believer in recreation and exercise. Yachting had few warmer friends in Toronto than he, while in the Winter he was always ready for a contest with the "stane and broom," he being a member of the Granite Curling Club.

His business interests outside of the Rice Lewis Company were wide-reaching. In 1878 he was president of the Toronto Board of Trade, and for many years was one of the forceful members of that institution. He was for several years president of the St. Lawrence Foundry Co. and the Northey Mfg Co., and at the time of his death was a director of the Bank of Hamilton and the Toronto General Trusts Corporation and the Victoria Rolling Stock Company, and chairman of the Board of Harbor

Commissioners, to which position he was appointed in 1881.

Mr. Lee is survived by a family of seven children, three sons and four daughters, his wife having died some years ago. The sons are: Arthur Burdette Lee, vice-president of Rice Lewis & Son, Limited; Victor, at home; and Gordon, in the Northwest Territories. The daughters are: Mrs. H. C. Wilson, of Edmonton; Mrs. William Crowther, of Toronto; Mrs. D. McMurchy, at home, and Miss Violet Lee, at home. Mr. T. B. Lee, the general manager of the company, is a nephew of the deceased.

A HAPPY EVENT AT LINDSAY.

ON Tuesday last, at Lindsay, Mr. W. T. Robson, president of the Canadian Club of New York, was married to Miss Sylvester, daughter of Lieutenant-Colonel Sylvester, of that town. Mr. Robson has had a most successful career, and one deserving the emulation of every young Canadian business man. He is a native of Lindsay, where he obtained a thorough grounding in the dry goods, grocery and hardware trade in his father's store. During this time he began to write business articles for The Canadian Grocer and other trade journals; which attracted the attention of the publishers of the MacLean trade papers. Mr. Robson was offered, and accepted, an advantageous position with the MacLean Publishing Co., in Toronto. He was later moved to the Montreal office, from whence he was sent to New York about two years ago to take charge of the office there.

Mr. Robson, besides his success in the business world, has been prominent in social circles. As president of the Canadian Club of New York, he is at the head of an important organization, with a membership numbering three or four hundred. In the club are enrolled the names of two United States senators, and several multi-millionaires, besides other Canadians prominent in the life of New York City. The Grocer extends to Mr. Robson its heartiest congratulations.

Mr. Wm. Dobie, general manager and treasurer of E. W. Gillett Co., Toronto, was a caller at the Montreal office of Hardware and Metal this week. Mr. Dobie, who was accompanied by Mrs. Dobie, is taking a well-earned vacation, his trip comprising a tour through Lakes Champlain and George, Boston, New York, Philadelphia, Atlantic City, and home via New York and Hudson River.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL.

232 McGill Street.

Montreal, June 24, 1904.

LAST week saw the hardware business apparently settled down to an ordinary Summer trade after the Spring rush. This week a slight revival has taken place, and an increased business is being done on all sides. For the time of the year, the demand is exceedingly good, as a falling off is generally expected about this time, due to the holiday season opening up. Haying has already commenced in some counties, and this will no doubt have an immediate effect on repeat orders for haying tools. The crop is said to be a record one this year, and it is expected that the demand will consequently be unusually great.

One of the effects of the change in the tariff might be noted, which is, an increase of from 12 to 15 per cent. in American ammunition. It was mentioned last week that prices on hardware imported from the United States would likely increase soon, and already the effect is being felt. Besides ammunition, American saws have advanced and a slight rise in price in game traps is also reported. On the other hand, the price of cordage has dropped one-half cent per lb. This is said to be due to a decrease in the price of raw material. There is also a change in the shipping price of horseshoes, due to packing. Up to three sizes in a keg, 10c per 100 lb. is charged, and more than three sizes, 25c.

There is no shortage in nails or screws this week, but some sizes of bar iron are said to be scarce. Inquiries are coming fast, and orders are being promptly filled.

Hay Scythes—A few repeat orders have been received, but an unusually big demand is expected. Prices, \$5 to \$7 a dozen.

Grain Scythes—The outlook is extremely good. Prices \$7 to \$12 a dozen.

Grass Hooks—A splendid business is being done in these, with a much greater demand than usual.

Scythe Stones—As is the case with grass hooks and scythes, there is a good demand for scythe stones. We quote: Red End, \$3.50 a dozen; Baie de Chalcur, \$4.50 a dozen; Acme, \$6 a dozen.

Wood Rakes and Hay Rakes—A brisk trade is being done. Prices are: Straight, \$1.35 to \$1.60 a dozen; bent, \$1.50 to \$1.80 a dozen.

Lawn Mowers—A brisk demand for all sizes still keeps up, with no sign of abating. Prices are the same. We quote

as follows: With 8 inch wheel, sizes 12, 14 and 16 inch, \$2.65 each; with 9 inch wheel, size 12, \$3; size 14, \$3.12 1-2; size 16, \$3.25 each; Philadelphia pattern, size 12, \$3.25; size 14, \$3.50; size 16, \$3.75 each; High Wheel, size 12, \$4; 14, \$4.25; 16, \$4.50; 18, \$4.75; 20, \$5.25 each.

Garden Hose—Business is good in garden hose, and a lively trade is reported. Discounts continue: Trade, 75 per cent.; Western, 65 and 10 per cent.; white, 40 and 10 per cent.; maroon, 40 and 10 per cent.; cotton, 60 per cent.

Hose Reels—The demand is fair this week. Prices 15 to 25 per cent. higher than last year.

Lawn Sprinklers—There is not much change in the market. Business fair. Prices as before, \$2.50 to \$18 a dozen.

Ice Cream Freezers—The continued warm weather is not without its effect, and many repeat orders for ice cream freezers are reported. We quote the following range of prices for the leading brands: One quart, \$1.50 to \$1.60 each; 2 quart, \$1.70 to \$1.80 each; 3 quart, \$1.95 to \$2.25 each; 4 quart, \$2.35 to \$2.60 each; 6 quart, \$2.95 to \$3.25 each; 8 quart, \$3.70 to \$4.10 each; 10 quart, \$4.75 to \$5.50 each; 12 quart, \$5.75 to \$6.50 each; 14 quart, \$6.75 to \$7.50 each.

Washing Machines—Business has fallen off somewhat, and not many orders are reported. We quote as follows: Round (three legs), \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Agricultural Wrenches—A fair demand is reported this week, which is a change for the better in this line.

Harvest Tools—A few repeat orders have been received, and a big trade is anticipated in the near future. Discount as before, 60 per cent.

Spring Hinges—The business done in spring hinges this week is fairly good. We quote as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—No great demand. Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10-inch sizes is \$4.25.

Wire Coat and Hat Hooks—A fair business is being done. Prices continue 75c a gross for 3 inch.

Churns—The market is fairly bright in churns. Discounts, 40 and 15 per

cent. f.o.b. Montreal, and 30 and 15 per cent. f.o.b. factory.

Green Wire Cloth—Trade continues active. Price, \$1.50 for 100 square feet.

Poultry Netting—A fairly good business is still being done. Discounts for 2 inch 19 gauge standard extras are 60 and 5; for 2-inch 16 gauge the discounts are 55 and 5 per cent.

Galvanized Poultry Netting Staples—The demand is keeping up well. Prices are: Sizes 5-8, 3-4, 1 1-8, 10 lb. boxes, \$12.50 list; 25 and 50 lb. boxes, \$12.25 list; 100 lb. boxes, \$12 list. Less 57 1-2 per cent.

Galvanized Wire—Business in this line is none too bright at present. We quote as follows: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots 12 1-2c extra per 100 lbs. will be charged.

Barb Wire—There is a good supply of barb wire on hand just now, and a big trade is being done. We quote: \$2.75 per 100 lbs. f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Carlots of 15 tons \$2.40 f.o.b. Cleveland.

Smooth Steel Wire—A sluggish market. We quote: Bright and annealed, \$2.50 per 100 lb. f.o.b. Montreal, Toronto, Halifax, London, Hamilton and St. John. Net extras per 100 lb. are now as follows: Coppered wire, 60c; tinned wire, \$2; oiling, 10c; spring wire, \$1.25; best steel wire, 75c; bright soft-drawn, 15c; hay-baling wire, 20 to 25c.

Annealed Hay Wire—A decidedly brighter tone to this market is noted. Prices and discounts the same.

Fine Steel Wire—This line is moving fairly well. Discounts 25 per cent., with net extras as follows: 1 and 2 lb. hanks, 25c per 100 lbs.; 1-2 lb. hanks, 37 1-2c; 1-4 lb. hanks, 50c.

Brass Wire—Not much business this week. Discount as before, 60 per cent.

Copper Wire—There is some improvement in copper wire sales. Discount, 60 per cent.

Galvanized Buckets—No change in price this week. A good trade. Discount, as reported lowered last week to 50 per cent., is the same.

Rivets and Burrs—This line is moving well. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the

usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

Tinned Roofing Caps—There is no change this week. A steady trade is being done. Price as before, 6c a lb.

Screws—A lively trade is reported. The slight shortage of last week has again been caught up with. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—The new prices in bolts and nuts still hold, and a lively trade is reported. We quote discounts as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off.

Washers, 45 per cent. off.

Cut Nails—There is a good supply of cut nails at present. Business is very brisk. We quote as before, \$2.30 per keg f.o.b. Montreal, Hamilton, Toronto and St. John.

Wire Nails—The supply continues ample this week, and a big business is being done. We quote the following prices: \$2.40 per keg carlots and \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Pressed Spikes—Demand is fairly good. Discount, 25 per cent.

Horseshoes—A lively business this week in horseshoes. Our quotations are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—We quote C brand 40, 10 and 7 1-2 per cent. off list; other brands 55 per cent. off list.

Shot Guns—A good demand is reported, with no shortage this week as formerly.

Ammunition—There has been an advance this week of from 12 to 15 per cent. We quote: Rim fire cartridges, 30 and 2 1-2 discount from list; centre fire, 5 per cent. advance on list.

Game Traps—A slight advance is noted this week. The former discount was

72 1-2 per cent., and the present discount is 70 per cent. off list.

Roofing Pitch—The demand keeps up well. Considerable work requiring this is now being carried on. Prices continue \$1 per cwt.

Building Paper—This is one of the most active lines at the present time. We quote as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Firebricks—The market is not at all brisk at present.

Cement—The cement business has not reached its usual state this year. The season is very backward, and a normal business is not yet being done. Prices remain unchanged at former quotations, which are: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex cars.

Cordage—There is a lively trade being done in cordage at the present time. A change in price is noted this week, which amounts to practically half a cent a lb. lower price on manila and sisal rope. This is due to a decreased price in raw material. This week's quotations are as follows: Pure manila, 14 1-2c; British pure manila, 12c; sisal, 11 1-2c; double lath yarn, 10c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

PLUMBING GOODS.

Iron pipe is still the most uncertain item on the list, for although no changes are given out, there is no pretence that prices quoted are closely followed. For good orders considerable concessions are obtainable, but nominally the old prices are unchanged. There is an active trade in all lines of plumbing supplies.

Lead Pipe—There is an active business at steady prices. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs. extra; f.o.b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—Business is of average volume. We quote discounts as follows: Light soil pipe, 3 to 6 in., 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

Iron Pipe and Fittings—Subject to remarks in the introductory paragraph above as to concessions obtainable, we quote the following official prices:

Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Solder—Tin is lower this week, but the decline has not been sufficient to make any difference in solder quotations for ordinary business. Doubtless for large orders some concessions would be made. Bar solder is still quoted at 17 1-2c, and wire at 18c.

METALS.

General business in metals is fairly active this week. May and June have been good months in the heavy goods trade. One large house report that their business for these months has been even better than for the same months of 1903, but of course the increase has not been sufficient to compensate for the slack trade in February, March and April. The pig iron market is quiet, and the future still uncertain. Bar iron is selling well. Tin is lower this week and a further decline will be noted in quotations below. Copper has been fluctuating since last report, but latest advices indicate a strong and advancing market. A day may make a change, however. Lead is about the same as a week ago, a decline having been followed by a recovery. Black sheets are cheaper.

Pig Iron—There is a steady consumption of pig iron, and hence there is some business doing, although buying is still restricted to current requirements. Customs returns show a falling off for the month of May of imports of pig. Nominally, at least, prices are unchanged. We quote:

"Disc," No. 1.....	\$17.50 delivered Montreal.
"Dom," No. 1.....	18.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50 " "
Glengarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.00 " "
" (prcial).....	17.50 " "
Ayresome No. 1.....	17.50 " "
" No. 3.....	16.90 " "
Clarence No. 1.....	16.25 " "
" No. 3.....	16.00 " "

Bar Iron—Business continues exceptionally active. Prices quoted are as follows: Merchants' bar, \$1.75; horse shoe iron, \$2; forged iron, \$1.95.

Merchant Steel—Business is of average volume. We quote: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.55; machinery (iron finish), \$2.45; square harrow, \$2.45.

Tool Steel—Trade is of average volume. We quote: Black Diamond, 8c to 9c; Sanderson's, 8 to 9c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

Black Sheets—There has been a decline of 10c this week. Trade is active. We quote: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Galvanized Iron—An exceptionally active trade is being done at present in galvanized iron. Prices are as follows: 28 gauge, Queen's Head, \$4.30; Gorbals "Best Best," \$4.30; Apollo, 10 3-4 oz., \$4.30; Fleur-de-Lis, \$4; Comet, \$4; Bell brand, \$4; "Windmill Best," \$4. In less than case lots, 25c extra.

Canada Plates—We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized, \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Sheet Zinc—There has been no change since last week, and the remarks then made still apply. Case lots are selling at \$6.25 to \$6.50. Small quantities, \$6.50 to \$6.75.

Zinc Spelter—Quoted at 6c, subject to concessions for quantities.

Tinplates—Market firm. No change. Cokes, \$3.75 and charcoal, \$4.

Ingot Tin—A further weakness has developed, and there has been another decline of 1-2 cent this week. The price is now 30 to 30 1-2c.

Ingot Copper—Latest advices indicate an advancing market. Local quotations, 13 1-2 to 13 3-4c.

Pig Lead—Last week's figures still obtain. They were \$3.25 to \$3.35.

Coil Chain—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on carlots.

Scrap Metals and Old Materials—There has been a general decline. We quote: Heavy copper and wire, 10 to 10 1-2c per lb.; light copper, 9 to 9 1-2c; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 1-2c; light brass, 5c; lead, 2 3-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery, scrap, \$12 to \$13; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

HIDES.

Not a change has been recorded in hides. We quote:

No. 1 beef hides.....	0 09 0 08 1/2
No. 2 ".....	0 07 0 07 1/2
No. 3 ".....	0 06 0 06 1/2
Lambskins.....	1 00
No. 1 calfskins.....	0 11

ONTARIO MARKETS.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, June 25, 1904.

ALREADY the effects of the "anti-dumping" clause in the new tariff regulations are manifesting themselves. Some wholesale houses are advancing their prices on American ammunition and rifles from 7 1-2 to 10 per cent. Some lines of game traps are also dearer. Another advance, this one being credited to a scarcity of raw material, is noted in fork, hoe and other handles, which are about 10 per cent. higher. There is a good trade doing in all seasonable lines, and particularly in lines needed for building operations. On the whole, the volume of trade is fully up to last year at this time, and greater activity is looked for in the Fall.

Harvest Tools—There is a particularly good demand at the moment for scythes, snaths, and other such lines. Prices are steady. The only change in price is in fork, hoe and other handles, which are 5 to 10 per cent. higher.

Sporting Goods—The business in ammunition continues to expand. Some guns and rifles are being taken, but trade in this line is just opening up. Owing to the "anti-dumping" clause in the new tariff, the price of several lines of United States ammunition and rifles will be advanced.

Washing Machines—Business is moderate; prices steady, as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowsell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Woodenware—A fair business is reported. Prices are now as follows: Tubs, No. 0, \$11.55; No. 1, \$9.35; No. 2, \$8.25; No. 3, \$7.15; pails No. 1, 2 hoops, \$1.93; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 6 dozen packages (12 to case), 95c.

Oil Stove Wick—Prices are steady since the recent advance of about 10 per cent.

Steel Track Door Hangers—We quote as follows: Steel track, 1x3-16 in., \$3.50; 1 1-4 x 3 1-16 in., \$4.50 to \$4.75.

Chain—A good sorting business keeps up. Prices are as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Lawn Mowers—Demand for this line now quiet. Prices are unchanged, as follows: Woodyatt, 10 1-2 inch wheel, \$8.50; Star, 9 inch, \$7; Daisy, 8 inch, \$5.75; Philadelphia, 7 1-2 inch, \$7; Ontario, 7 1-2 inch, \$15.80; King Edward, 12 inch, \$9.50 (14 inch cut in above). D. Maxwell & Sons, 10 1-2 inch, \$7.50 to \$10; 9 inch, \$5.50 to \$6.25; 8 inch, \$4.90 to \$5.50. Discount 50 per cent.

Screen Doors—A fair trade is doing in this line. We quote as follows: Common, two or three panel, walnut, 4 inch, \$6.50; yellow and green stained, \$6.75; in natural colors oil finish, \$8.75, with 20c less for 3-inch style.

Screen Wire Cloth—Prices steady at \$1.50 per 100 ft.

Spring Hinges—There is a fair demand. Prices steady, as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Barb Wire—Sorting trade is still good. Prices are steady. We quote as follows: \$2.75 per 100 lbs. f.o.b. Toronto and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—A fair trade continues at unchanged prices. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs. extra charged.

Coiled Spring Wire—Sorting orders are still coming in briskly. Prices are steady. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—A good business is reported, with prices still steady. Quotations are: \$2.45 per keg f.o.b. Toronto, with carlots \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Not much doing, with prices as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is still quiet. Prices are unchanged. We still quote discounts as follows: "C" brand, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—An active demand continues. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Business keeps brisk in all sizes, at steady prices. We quote as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—Business has been fairly good since the discounts were increased. We now quote: Carriage bolts,

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

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Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

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C.F. JACKSON & CO., Limited

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151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Cordage—A fair sorting trade is doing. Prices are unchanged. We quote: Sisal, 10 1-4c; standard, 10 1-4c; standard manila (550 ft.), 11 1-4c; manila (600 ft.), 12 1-4c; pure manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are unchanged as follows: Pure manila, 15c; British pure manila, 12 1-2c; sisal, 12c; double lath yarn, 11c; single lath yarn, 10 1-2c; double shingle yarn, 11c; single shingle yarn, 10 1-2c; sashcord "Hercules," 32 to 35c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 25 to 28c; 4 ply, 32 to 34c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Cement—A good trade is being done. We quote: Canadian Portland, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2, ex-store; American Portland, \$2.30 to \$2.40 f.o.b. Toronto.

Firebrick—Trade in firebrick continues rather slow. Prices are steady. We quote: English and Scotch firebrick, 28 to 30c; American, low grade, 22 to 27c; high grade, 32 1-2 to 40c.

Building Paper—Business is at present of much larger volume than at this time last year. We quote: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

PLUMBING GOODS.

An improvement in the volume of business is reported. In fact, the demand is considerably in excess of this time last year. There is a particularly good enquiry for plumbing goods in Western Ontario, and of corporatic supplies (waterworks, brass and iron goods) in the Northwest. Prices are nominally unchanged, but cutting is still prevalent.

Lead Pipe—Business keeps up well. We quote: Lead, 7c; lead waste pipe, 8c; discount .35 per cent.

Soil Pipe and Fittings—A good trade is doing at steady prices. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—There is a good trade, with cutting still prevalent. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (stand-

IRON STEEL and METALS

Close prices to wholesale buyers only.

A. C. LESLIE & CO.

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MCDUGALL STANDARD PUMPS



stand the hard usage better than any other pump made, as they are composed of iron and steel, which wears much better than wood.

They are MADE IN CANADA, by Canadian mechanics, and you should handle them in preference to foreign makes.

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GALT, ONTARIO.

"ALPHA" HIGH SPEED STEEL

Crucible Cast Steel
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NEW GLASGOW, N.S.

Manufacturers of

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And SIEMENS MARTIN

OPEN HEARTH STEEL

ard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1-2 to 70 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

Iron Pipe—The low prices noted last week still prevail. A good trade is being done at the figures. We quote f.o.b. Toronto as follows: Black pipe, 1-2 in., \$1.95; 1-4 in., \$1.95 to \$2.05; 3-8 in., \$2.15 to \$2.25; 1-2 in., \$2.35; 3-4 in., \$2.95 to \$3; 1 in., \$4.25 to \$4.30; 1 1-4 in., \$5.95 to \$6.10; 1 1-2 in., \$7.15 to \$7.40; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.70 to \$2.85; 3-8 in., \$2.90 to \$3.05; 1-2 in., \$3.20 to \$3.30; 3-4 in., \$4.10 to \$4.20; 1 in., \$5.95 to \$6.15; 1 1-4 in., \$8.30 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

Enameled Ware—An active trade in this line continues. Though prices are firm, there is not much likelihood of an advance. We quote: "Standard," 5 1-2 feet rolled rim, first quality, at \$21.60; second quality, \$15.50 to \$16.

METALS.

The curtailment of production in the United States, while an indisputable proof of the contraction of business in that market, has a good effect on business here, as it is recognized that the smaller the surplus production in the United States, the less likelihood of pig iron from that country being placed on the Canadian market. It is believed, moreover, that the "anti-dumping" clause of the new tariff will have an excellent effect. In other metal a fairly good market is shown.

Pig Iron—The market is somewhat improved, but is still far from firm. We quote:

Middlesboro, f.o.b., Toronto.....	\$19 25
Hamilton, No. 1	18 50
" No. 2	17 75 to 18 00
" No. 1	17 00 to 17 25
Midland, No. 1	18 50 to 19 00
" No. 2	18 00 to 18 50
" No. 1 f.o.b. Midland.....	17 00 to 17 25
Radnor, f.o.b. furnaces.....	30 00
Londonderry, f.o.b. furnaces.....	17 50 to 18 00

Bar Iron—Competition for business continues keen. Prices are somewhat weaker. We quote \$1.75 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet; by special agreement according to length and size.

Steel—Prices are steady, with an excellent trade doing. Quotations are as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

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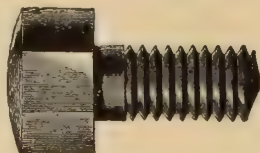
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Russell Staple Pulling Button's Plyer, made of a higher grade of steel than has ever been used in the manufacture of these tools before and the weight increased to 13 1/4 pounds.

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CANADIAN AGENT

GODFREY S. PELTON

338 St. Paul St., - Montreal

A. Shaw & Son

52 Rahere St., E.C., London

Tin—Prices are somewhat easier, the range now being from 29 to 30c. An active business is doing.

Galvanized Sheets—There is a good demand at unchanged prices. Quotations are as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tinplates—Considerable business has been done. Stocks are light. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—A fair demand is reported. A large quantity is being discharged at Montreal for delivery throughout Ontario. Prices are steady. We quote as below: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Copper—The market in Great Britain shows much greater activity, and other markets are improved in consequence. Prices are easy, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

Brass—There is a fair trade, with the discount steady at 1½ per cent.

Lead—There is a good demand at unchanged prices. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—Stocks are light. Buying is active at 5 3-4 to 6c per lb.

Solder—There is a fair trade. Prices are 1-2c lower. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Antimony—7 1-2 to 8c per lb.

Old Material—Business in this market has been rather dull the past week, owing to the fact that the mills have not been buying in such large quantities. There has been a slump in the price of several articles quoted below. The quotations are as follows: Heavy copper and wire, 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 9 1-4c per lb.; heavy yellow brass, 8 to 9c per lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.50 per cwt.; scrap zinc, 3c per lb.; iron, No. 1 wrought, \$8 to \$9; No. 2 wrought, \$3; machinery cast scrap, \$12; stoveplate, \$9; malleable and steel, \$4; old rubbers, 4 1-2c per lb.; country mixed rags, 70c per 100 lbs.

Petroleum—There is no special feature in the market this week. Trade continues to be brisk, at the following quotations: Canadian water white, 18c; Canadian prime white, 16 1-2c; American water white, 19c, ex-warehouse.

COAL.

Considerable activity is being experienced and prices are firm. We quote: Anthracite, \$5.25; bituminous for steam purposes, \$2 to \$4, according to quality, f.o.b. Buffalo and bridges.

Hides, Skins and Wool.

Hides are noticeably scarcer than they were last week, while wool is coming in freely. There are no changes in last week's prices to record. We quote the following prices:

HIDES.

No. 1 green, per lb.	0 08
" 2 " " "	0 07
" 1 " steers, per lb.	0 08½
" 2 " " "	0 07½
Cured, per lb.	0 08½

CALFSKINS.

Veal skins, No. 1, 6 to 14 lb. inclusive	0 11
" " " 2 " " "	0 09
" " " 1 15 to 20 lb " "	0 10
" " " 2 " " "	0 08
Deacons (dairies), each	0 65
Sheep skins	1 25
Lamb skins	0 35

WOOL.

Unwashed wool, per lb.	0 10
Fleece wool, new clip, per lb.	0 17
Pulled wools, super, per lb.	0 18 0 20½
extra	0 20 0 22

LONDON METAL MARKET.

From The Metal Market Report June 16

Pig Iron—Scotch warrants, Glasgow, closed at 51s 3d, unchanged. Middlesbrough No. 3 foundry at 42s 10 1-2d, an advance of 6d in the last week.

Tin—Spot tin opened irregular at £116 5s., futures £116 5s, and after sales of 100 tons of spot and 400 tons of futures closed firm at £116 17s 6d for spot and £116 7s 6d for futures, making price as compared with a week ago £3 2s 6d lower on spot and £2 10s lower on futures.

Copper—Spot copper opened quiet at £56 7s 6d, futures £56 5s, and after sales of nil tons of spot and 175 tons of futures closed quiet at £56 7s 6d for spot and £56 5s for futures, an advance of 7s 6d on spot and 5s on futures in the week.

Lead—The market closed at £11 10s, making an advance of 1s 3d in the week.

Spelter—The market closed at £21 15s, making price as compared with a week ago unchanged.

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of HARDWARE AND METAL.

Vancouver, B. C., June 18, 1904.

THE days of big log rafts to be towed long distances at sea are apparently not over. The report comes from Seattle that the Robertson Raft Co. is at it again. They intend building a big raft, cigar shaped, at Stella, Washington, to be towed to San Francisco by the steamer Francis H. Leggatt. The raft is to be over 800 feet in length, and bound with immense chains.

In the past there has been some fear expressed by seafaring men that these big rafts would go to pieces at sea and become a menace to shipping, but while congress was petitioned to take steps to prevent them being constructed and towed to sea, nothing was ever done

A new industry has been added to the manufactures at Victoria, the British Columbia Foundry & Engineering Works, Limited, having been organized with a capitalization of \$100,000. The buildings are being erected at Esquimalt, as a more favorable location for marine work, owing to the dry dock and the B. C. Marine Railway being situated there. The new concern will have a most modern and complete plant. A new style of crane is being installed,



Corrugated Iron

For Sidings, Roofings, Ceilings, Etc.

Absolutely free from defects—made from very finest sheets.
Each sheet is accurately squared, and the corrugations pressed one at a time—not rolled—giving an exact fit without waste.
Any desired size or gauge—galvanized or painted—straight or curved.
Send us your specifications.

The Metallic Roofing Co.
WHOLESALE MANFRS. LIMITED
TORONTO, CANADA.

and the coke oven, cupola and other appliances are about complete. A new moulding machine is being put in, which greatly simplifies the work. Power is to be furnished from the British Columbia Electric Railway Co.'s Goldstream water power plant. Stevens & Hawkins have the contract for installing the electric appliances and the Seabrook Engineering and Machine Supply Co. the supplying of the tools and other equipment. Mr. Jas. Haggert, formerly with the Albion Iron Works, will be in charge of the pattern shop at the new foundry, and Mr. J. Stewart will be in charge of the moulding department.

It is expected that the new works will be running in a fortnight.

The terminus of the Grand Trunk Pacific is the great secret which many would give a great deal to learn. Mr. Forbes George Vernon, a former cabinet minister in this province, has been in the east conferring with General Manager Hays, of the Grand Trunk. It is said that his mission was to induce the Grand Trunk to take over the charter and interests of the Pacific, Northern & Omineca Railway, in the charter of which Mr. Vernon and others in British Columbia are interested. This charter allows the building of a road from Hazelton to Kitamaat. As Hazelton is the head of navigation on the Skeena River, and Kitamaat is on an arm of the sea away from the Skeena River, the importance of the effort is easily understood.

The fact that Mr. C. W. D. Clifford, M. P. P., one of Mr. Vernon's associates left yesterday on the steamer Tees for Kitamaat to build a wharf there, is outside evidence that there is some chance of work being begun at that point. It is suggested that at least a branch of the railway will be built from Hazelton to Kitamaat even if the main line continues down the Skeena River to Port Simpson. The route to Hazelton which has been surveyed is through a very level valley with no

where more than a one per cent. grade. The harbor of Kitamaat is also a very fine one, being much like Burrard Inlet, the famed port of Vancouver, a land-locked body of water, free from ice all the year and with less drawbacks in the way of fog than some other places on the coast.

* * *

The jobbing trade of Vancouver is holding out for a big business with Dawson and other northern points after the first of July, when the special commodity rate goes into effect for six weeks, or until the middle of August. In the meantime the shipments of hardware and tools have been very light so far this season. Nothing but emergency orders have been filled for some time.

It must be remembered that the large stocks of goods which were stalled on the Lower Yukon last Fall will have to be absorbed, as many of the lines were covered by late re-ordering; also, that the Tanana country has taken large quantities of supplies this Spring, no less than three large cargoes being sent down the river and up the Tanana to Fairbanks for the big crowd of men who are in that country prospecting and working this season. The strike at the Takheena River, or Alsek District as it is called, also took up all the stocks which lay at White Horse and failed to get through last season. It is also stated that there is a large amount of new work being taken hold of and developed this season, so that the demands will not be less than last season, to put it conservatively.

* * *

An indication of the way building is going ahead still in the City of Vancouver is found in the statement issued by the city building inspector, Capt. Geo. McSpadden. He states that permits have been issued for 568 dwellings since Oct. 1st, 1903, and that in the same time over 100 business blocks, large and small, have been begun. That means that nearly 700 buildings have been started in 211 days, or an average of over three per day.

The hardware and building supply trade has found the benefit of these heavy building operations. It has not been suffering from the depression which other lines of retail trade have felt. In fact the hardware dealers and dealers in building supplies should be very well satisfied with the season so far.

* * *

The change in the Act granting a bounty on lead has resulted in the shipments being resumed from the mines of the Kootenays to the Selby Smelting Works, San Francisco. There are several cars of lead bullion taken out on every steamer which calls. This lead, which could not be refined at Trail owing to the pressure on the refinery, will all be shipped back to Canada, coming via the same steamers which take it to California.

* * *

Mr. W. A. Bauer, D. L. S., returned this week from Swanson Bay, up the coast opposite Princess Royal Island, where he has been with a party of men making a survey of the last of the timber lands reserved by the Provincial Government to the Oriental Pulp and

Power Co. These lands are almost opposite Princess Royal Island, and the reserve carried with it the necessity to build a mill within two years after getting the lease. The company has now erected a wharf and buildings at Swanson Bay, and it is the intention to put in a saw mill to cut lumber for the erection of the pulp mill and other buildings. A large capitalization is represented in the proposed work. It will cost the greater part of a million dollars to establish the plant and business complete. English money is interested.

* * *

Some interest is evinced in the action of loggers who have been operating camps up the coast and are dependent on the mills to buy their cut. From the very unsatisfactory condition of the market for logs, which has caused a great number of booms to be held over in store, the loggers determined to hold a meeting, the primary object of which was to discuss the propriety of shutting down the mills altogether to give them a chance to catch up with the output of logs. It is, however, noted that the mills are very largely instituting their own camps, and are to that extent independent of the small logger.

Shipments of lumber to the Northwest are very fairly active. The Rat Portage Lumber Co., which has been closed down for six weeks putting in a band saw and otherwise improving the plant, is about ready to begin again.

—

MARITIME PROVINCES.

Halifax, June 20, 1904.

THERE is little of special interest to report regarding business conditions. There has been no change in the strike situation at Sydney. The steel company have about 200 men at work, and some small shipments of surplus stock are being made. There has been no violence attempted, and a committee of the P. W. A. has been appointed to aid the city police in maintaining order. It has been decided to arm the latter with revolvers. In all other sections of the province trade is normal, but in no case is it specially active. All branches of the fisheries are doing well; there is promise of another large apple crop, and agriculture generally is in a thriving condition. The outlook for Fall trade is therefore good, and it is generally believed that the present conservatism will be of short duration.

* * *

The local hardware market is steady. The tariff changes, so far as they interest the trade, have met with approval. The item regarding glass is important, as large direct importations of this article have hitherto been made here from Belgium. Some skepticism is expressed regarding the operation of the clause to prevent dumping, but it is conceded that if it should be found practicable in its workings it will be an excellent thing for Canadian trade. Already there is talk of better prices on a number of lines that have hitherto

been depressed on account of unfair foreign competition.

* * *

The merchants of Granville street, in this city, have formed an association for the purpose of improving the appearance of that thoroughfare. A deputation waited upon the city council and offered to bear half the expense of paving the street, providing the city would bear the other half. The association is intended to be a permanent one, and will pay attention to keeping the street clean and in perfect condition, thereby furnishing an object lesson, which it is hoped will have a good effect on all parts of the city. It is on this street that a large number of the wholesale houses are located.

* * *

The Imperial War Department is calling for tenders for the erection of a substantial addition to the South Barracks in this city, to accommodate eighty-four non-commissioned officers and men. There will not be much in the contract for local dealers, as the War Office is providing all the cement, glass and hardware required, which for Imperial army purposes come in free of duty.

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THE BRITISH STEEL MARKET.

FOR the second week in succession we are unable to record any business placed with the British rail-makers, which indicates a very serious slackening in demand. Business generally is certainly not mending yet, although the indications of a few months ago seemed to point, at any rate, to a moderate revival of activity. Everywhere dissatisfaction is expressed loudly, and it seems almost as if the period of stagnation was to last indefinitely. Foreign advices are none too hopeful, more particularly those from the United States, where business is steadily becoming worse, and prices are only quoted at their present level for the sake of keeping up appearances. This can mislead only those who are wilfully blind to the weak element in the situation. True, there is no attempt being made to force United States iron and steel upon the market (although the same cannot be said regarding Canadian bounty-fed metal), but nobody can tell how long the present attitude of passivity in this respect will be maintained. Probably buyers here could obtain American supplies of the usual classes of half-manufactured steel at, say, 79s, c.i.f.—perhaps even at a rather lower rate—but nobody can be found who wants it, and if such could be discovered the extraordinary contract under which sales are made, and the entirely unprotected position of the buyer in respect of delivery stand in the way of business.—The Ironmonger.

PITTSBURG METAL MARKETS.

From The Iron Trade Review, June 23, 1904.

CURTAILMENT of production of pig iron and steel is well under way, and in the past week has proceeded on a scale suggesting a pronounced lessening of consumption. In the Central West twenty-three blast furnaces of steel companies are now idle and seven merchant furnaces. This number will be further increased by July 1. Steel works shutdowns already include the Shoenberger Bessemer plant, the Shenango Valley works at New Castle, the Mingo Junction works, the Newburg, O., Bessemer mills, and two-thirds of the open-hearth furnaces at Sharon. An independent Wheeling steel works will close down within a few days and the La Belle Iron Works at Steubenville by July 1. It remains to be seen whether the stopping on June 30 of sheet and tin plate mills and the portion of bar mills affected by the wage disagreements, will result in a further cutting off of steel capacity. But all indications now point to a quiet Summer; the surprise is, in view of the conditions of the past two months, that the cutting off of steel production should thus early be so pronounced.

The question of a revision of prices of steel products has come up, in view of the known decline in ore and pig iron, and the cutting of agreed prices on steel billets. It is conceded that the recent falling off in consumption of steel with the indications that this will go farther, puts a greater strain upon all association arrangements. But there is little inclination on the part of the leading manufacturers of steel to change their schedules. They present an open market as the alternative to maintaining present agreements, arguing that to take a few dollars per ton from the prices generally maintained for the past six months would not lead to improvement in demand; that other causes have much to do, and price very little, with the halting attitude of consumers. The prospect of an open market is naturally not relished by lesser producers who are parties to agreements, and any such suggestion is apt to insure their continued support to present schedules. In spite of the cutting in billets and the minor evasions on certain pool-governed products, there is little prospect of a general revision under present conditions.

What activity appears in pig iron is chiefly due to inquiries from a few large producers, who take account of the pos-

sibilities of a change from extreme depression in the iron trade, under the rigid curtailment compelled by low prices. In the Pittsburgh district purchases of 9,000 tons, chiefly by one important interest, are reported. Northern No. 2 sold at \$12.75, gray forge at \$12.15 to \$12.25, and Southern No. 2 at \$9 Birmingham. A portion of the requirements of an Ohio pipe interest have been covered, and more is pending. The large harvester machinery contract for about 30,000 tons, previously referred to, has not been closed. Chicago reports a number of inquiries involving 500 to 5,000 ton lots. In the east as low as \$8.75 Birmingham for No. 2 iron is reported on one sale. Northern irons are generally from 25 to 50c lower in the week, though the business done has not been sufficient to indicate what furnaces would do on a round lot. At New York a sale of 1,000 tons for export was made and in a moderate way export business may be increased.

Changes in finished products are toward lighter demand and lower prices. On bar iron some cutting is reported in the Chicago district, as well as on one Pittsburgh district contract, though eastern manufacturers reaffirmed prices. The wire industry is slacking up very perceptibly. Sheets have made a new low record, and 2.10c for No. 28 has been done on carload business. An eastern mill has taken an order for forty miles of 10-inch wrought pipe. Structural business continues disappointing. In spite of contrary reports indications are that no change in the price of rails will be made for some time; the question of the 1905 basis, it is felt, does not call for a definite declaration as yet.

Pig Iron—Despite the declining market, one large local consumer this week closed for a trifle over 9,000 tons of foundry and forge iron for delivery the third quarter. About half went to southern furnaces and the remainder went to northern and Virginia stacks. On the southern foundry iron \$9 Birmingham was done and \$8 on the forge iron. On the northern foundry a little better than \$12.75 Pittsburgh was done on No. 2, while on forge iron it is reported that \$12.25 Pittsburgh was shaded. Several small lots of No. 2 foundry have been reported sold at prices ranging from \$12.75 to \$13 Pittsburgh, although as low as \$12.60 has been reported. The drop in forge iron is the surprise of the week, as low as \$12.15 Pittsburgh having been reported. On Bessemer iron \$12 at the furnace seems to be the nominal price, but this could be shaded on a desirable order. On basic the same price is quoted, although as low as \$11.75 at the furnace has been quoted.

Bars—The Pressed Steel Car Co. this week placed an order for 1,500 tons of iron bars, portions of the tonnage having been taken at 1.25c flat, Pittsburgh. The demand for steel bars is by no means large, and specifications on existing contracts continue light. We make the following quotations: Bar iron, 1.25c

to 1.30c Pittsburgh for local delivery, while for western shipments quotations are based on 1.25c to 1.35c Pittsburgh. Hoops are held at 1.55c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open-hearth, 1.40c; plow beams and cultivator beams, 1.35c net; channels, angles, zeos and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 lbs. of a size, not less than 1,000 lbs., 10c advance; less than 1,000 lbs. of a size, 30c advance.

Wire and Wire Nails—The wire and nail mills of the American Steel & Wire Co. at South Sharon were shut down this week, while the Shoenberger and Newburg Bessemer steel plants of that company are also idle. This would indicate a considerable falling off in consumption as compared with the demand earlier in the year. Prices continue to be shaded from \$1 to \$2 a ton. Agreed quotations are as follows: Wire nails, carload lots to jobbers, f.o.b. cars Pittsburgh, are quoted \$1.90 base; plain wire, carload lots, \$1.80 base; barb wire, carload lots, \$2.20 base; staples, carload lots, \$2.05 keg. Galvanized, 30c extra. Carload lots to retailers are held at 5c advance in all lines, and on less than carload lots a further advance of 10c is charged. Steel and iron cut nails, carload lots, \$1.75. and less than carload lots, \$1.80 f.o.b. Pittsburgh, plus freight to point of destination. Terms, 60 days less 2 per cent. off in 10 days.

Structural Material—The Wabash Railroad Co. has not yet closed for its elevated tracks on the south side, although the contract is expected to be placed this week. The Pennsylvania Railroad will open bids this week for its Duquesne Way elevated road, requiring about 5,000 tons of steel. We make the following quotations: Beams and channels, 3 to 15 inches, 1.60c; 18 to 24 inches, 1.70c; tees, 1.65c; zeos, 1.60c; angles, from 3 to 16 inches, 1.60c; universal mill plates, 1.60c.

Pipes and Tubes—The Philadelphia Co. has placed another contract for 40 miles of 10-inch iron pipe, the order going to an eastern mill. There is considerable cutting on merchant pipe and demand is not heavy.

Coke—Coke production is also curtailed, no less than 2,000 ovens having gone out in the past week in the Connellsville region, while prices continue to seek a lower level. Strictly Connellsville foundry coke is now selling at prices ranging from \$1.75 to \$1.90 and as low as \$1.65 has been done in extreme cases. On furnace coke for the last half \$1.40 to \$1.45 is quoted on strictly Connellsville product. Coke production is being heavily curtailed, and with the shutting down of furnaces a further curtailment is looked for. During the week ending Saturday, June 11, the production of the upper region is estimated at 193,247 tons, and the lower region 54,094 tons. The output during that week was reduced fully 10,000 tons.

Enamelled ware, white.....	45 p.c.
" Famous.....	50 and 10 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American	27 3/4 c.
Prime white American.....	25 1/4 c.
Water white Canadian.....	25 1/4 c.
Prime white Canadian.....	24 1/4 c.

SCRAP.

No. 1 cast iron.....	\$14 to 15
No. 2 ".....	7
Wrought iron scrap.....	5
Copper (heavy).....	8 1/2 c. per lb.
Yellow brass (heavy).....	7 1/4 c.
Light brass.....	5c. to 6c.
Lead pipe, or tea lead.....	2c. to 2 1/2 c.
Zinc scrap.....	1c.

PAINTS, OILS AND GLASS.

White lead.....	\$6 00 to \$6 50
Putty in bladder, 2 1/2 lb., in keg of 100 lbs.	0 02 1/2
Turpentine, pure, in barrels.....	\$ 0 97
Less than barrel lots.....	1 02
Linseed oil, raw.....	0 52
Boiled.....	0 55

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine....	0 29
" extra engine.....	0 27
" dynamo.....	0 35
" black.....	0 22
" cylinder.....	\$0 50 to 0 75
(as to quality)	

Harness oil.....	0 50 to 0 60
Neatsfoot oil.....	1 00
Vegetable oil, 1st pressure.....	1 00 1/2
2nd pressure.....	1 09 1/2

IMPERIAL STEEL & WIRE CO.

At the annual meeting of the Imperial Steel and Wire Co., Limited, in Collingwood, on Tuesday, the following directors were elected: John Charlton, M. P., Linwood; M. J. McLeod, M. L. A., Cornwall; Major Shaw Wood, London; W. H. Schneider, Hamilton; Major Currie, W. J. Lindsay, N. H. Stevens, Chatham; W. Saddington, Mull; A. H. Notman, Toronto; Major Donald, Dr. McKay, J. T. Duguid. The annual statement of the affairs of the company was very satisfactory. The plant, which is designed for an output of 100 tons of wire daily, will be completed some time in July. The company will manufacture wire, wire nails and wire fencing, and will employ about 200 men. The plant will be one of the finest in America. At a meeting of the directors the following officers were elected:

President—Major Currie.
1st Vice-President—Major Shaw Wood.
2nd Vice-President—W. J. Lindsay.
3rd Vice-President—W. Saddington.
Secretary—Major Donald.

Sufficient stock has been subscribed to operate as well as erect the plant.

COMBINING BUSINESS AND PLEASURE.

Mr. C. B. Stanley, of the Stanley Rule and Level Co., New Britain, Conn., was a recent caller at the London office of Hardware and Metal. Mr. Stanley, with Mrs. and Miss Stanley, have been touring Germany, France and Italy during the Winter and Spring. Besides sightseeing, Mr. Stanley was able to advance the business interests of his company in some of the continental markets.

IMPERIAL STANDARD SCALES

Manufactured by

The Burrow, Stewart & Milne Company, Limited
HAMILTON, CANADA.

Hay, Coal and Cattle Scales

with Patent cut-off
lever and all the . .
latest improvements



Can be supplied with either single or double beam.

Size of Platform 14 feet by 8 feet 3 inches.

No. 480—Capacity 3 Tons	No. 482—Capacity 5 Tons	No. 484—Capacity 8 Tons
" 481— " 4	" 483— " 6	" 485— " 10
	" 486— " 15	

This scale can be supplied as a cattle scale with guards.

Manitoba Depot, 117 Bannatyne Street East,
MERRICK, ANDERSON & CO., - WINNIPEG

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BARN & ROOF PAINT.

MADE WITH
**MANITOBA
PURE LINSEED
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The Greatest Seller in the Paint Line

Write us for new prices.

MANUFACTURED BY

G. F. STEPHENS & CO., LIMITED

70, 172, 174, 176 Market Street,

WINNIPEG, CANADA.

PAINT, OIL AND BRUSH TRADES.

PAINT AND COLOR IMPORTS.

THE article under this heading in the last issue of Hardware and Metal has been commented upon during the week by several color men, and the opinion is freely stated that the condition of affairs as shown by the official figures is far from satisfactory. There seems to be little doubt that if United States shippers were obliged to pay duty upon their home price as called for by our customs' regulations, there would be much less importing of United States colors, paints and varnishes. The great difficulty, however, is that of appraisalment.

Will the new "dumping" regulations be effective? Opinions are divided on this subject, but the doubters seem to be in the majority. It is evident that there are many ways by which these regulations may be evaded. For example, it has been pointed out that there is such a thing as invoicing goods to one's agent, who in turn invoices to the buyer. There may be some danger in this, but it is hard to see how the customs' authorities could detect it.

In most items on the paint and color list, the United States tariff is specific and, mainly because of this, it often amounts to five times as much as the Canadian tariff. Our duties are ad valorem, and the whole responsibility of rendering effective the new regulations as to "dumping" is thrown upon the appraisers at the ports of entry. They are required to ascertain the market price at the port of entry of the article imported. It is understood that the Government purpose expending large sums in order to secure reliable information as to foreign prices, but, all things considered, the appraiser's duties are difficult, and it is not strange that many Canadian grinders are inclined to be skeptical as to the benefits to be derived.

The Canadian color man is suffering from unfair foreign competition. Of this there is no doubt, but whether or

not the "dumping" regulations will afford any relief remains to be seen.

Paris Green Booklet.

THE Canada Paint Co., Ltd., are issuing free to their customers a little booklet giving an interesting history of the potato bug; whence it came; its mission and destiny. In the same brochure will be found directions for applying Paris green, and a valuable receipt for an antidote in case of poison.

The pamphlet is facetiously headed, "Read, Mark, Learn, and Let the Potato Bug Inwardly Digest."

Customers of the Canada Paint Company desiring to distribute these booklets to their customers should write to the company at Montreal for a full supply.

New Varnish Works for Toronto.

The Standard Varnish Works, one of the largest industries of the kind in the world, will come to Toronto. The Board of Control granted them the necessary permit to carry on business in this city. The company have acquired five acres north of the tracks, between Carlaw and Pape avenues. The company have branches in New York, Chicago and London, Eng. The amount to be invested here will be \$100,000.



What Should a Good Paint Be?

One season handling Hollywood brand will convince you that it is what it should be—

**GOOD PAINT TO COVER
GOOD PAINT TO WEAR
GOOD PAINT TO SELL**



What more do you want? Hollywood Paste, Ready-Mixed and Floor Paints wear on the job, not off it.

The Imperial Varnish & Color Co.

LIMITED,

TORONTO, ONTARIO, CANADA.

If You Buy

Varnishes	Paints
Japans	Colors
Lacquers	Glues
Stains	Bronzes
Fillers	Chamois
	Sponges

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LIMITED
MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.

Look Out!

When you buy Green just examine the label and be sure that it reads and looks like this:



That's your safe-guard. It means that the purest, most economical and durable paint in the world is

LUCAS
Imperial French Green

JOHN LUCAS & CO.

PHILADELPHIA
NEW YORK **CHICAGO**

McArthur, Corneille & Co., Montreal.



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Business is what every wide-a-wake dealer is after. The way to secure it is by a knowledge of the very best lines of goods to handle so that he can command and control the trade. Your competitor who knows more about the needs of the trade will steal your business away from you.

Boeckh's
AND
Bryan's

Paint Brushes
Varnish Brushes
Kalsomine Brushes
Whitewash Brushes
Decorators' Brushes
Machinists' Brushes

Can always be depended on to command the confidence and trade of practical men, because they are conscientiously and scientifically constructed of the best material, by the best workmen. They are good goods to stock and sell. They always bring a customer back.

OPERATING:

Boeckh's Toronto Factories
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Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, June 24, 1904.

ALL classes of dry colors, especially greens, have been in active demand during the last week. Ochres and oxides are coming forward freely from the main sources of supply, and are meeting with a quick distribution. The call for white lead is still brisk, and the general market may be said to be in a healthy condition as regards the turn over. All articles known as "cooperative goods" are likely to be advanced in the near future on account of the high figures asked for staves and barrels. Stains and enamels for household purposes, together with a great many lines of varnishes, are feeling the Summer call for decorating stock.

Prices throughout are steady this week. Quotations for turpentine are now settled at the minimum price mentioned in last issue. Linseed oil is unchanged. We quote:

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

Putty—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 82 1-2 to 83c per gallon; two to four barrels, 81 1-2 to 82c per gallon. For smaller quantities than barrels, 5c extra per gallon charged. Standard gallon of 8.6 lbs.

Linseed Oil—Raw, 1 to 4 barrels, 43c;

5 to 9 barrels, 42c; boiled, 1 to 4 barrels, 46c; 5 to 9 barrels, 45c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c; 25 lb. drums, 15 1-4c; 1 lb. packages, 16c; 1-2 lb. packages, 18c; 1 lb. tins, 17c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street, East.
Toronto, June 25, 1904.

BUSINESS shows decided activity for June. In fact, in some lines of prepared paints and varnishes the volume of trade is even larger than it

was during the Spring. It is not expected, however, that the aggregate trade for the Spring and Summer will reach nearly as large a volume as last year. Dry white lead is 25c lower. Otherwise there is no change in prices.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 43c; boiled, 46c; 5 to 9 bbls., raw, 42c; boiled, 41c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points. Another quotation is: Raw, 1 to 4 bbls., 43c; boiled, 46c; 5 to 9 bbls., 42c; boiled, 45c; 10 barrels and over open, ex-Toronto, 2 per cent. off 30 days.

Turpentine—Single bbls., 81c; 2 to 4 bbls., 80c; 5 bbls. and over, f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-

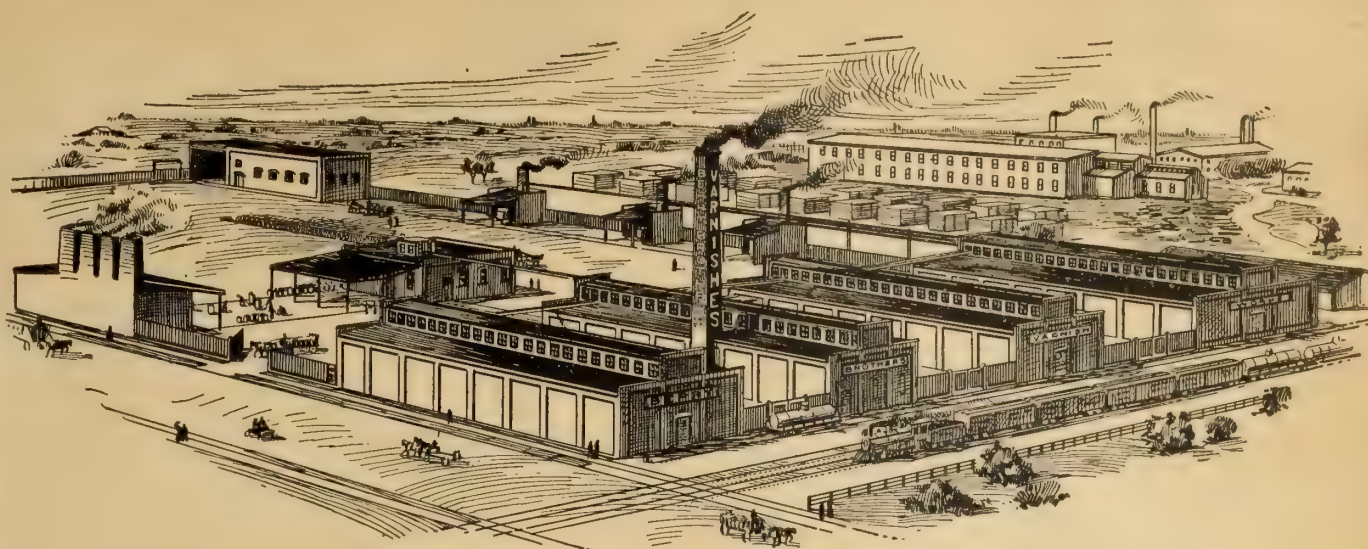
THEY MAKE THEIR OWN WAY



after being once introduced. Your customer will recognize the quality and order again. They stand every test for wearing qualities, covering power, etc. The only white lead used is **BRANDRAM'S B. B. GENUINE**. They are the best in Canada—**ANCHOR and ENGLISH Liquid Paints**.

HENDERSON & POTTS, Limited, Halifax.

HENDERSON & POTTS CO., Limited, Montreal.



IT IS NEARLY
HALF A CENTURY

since we commenced to make Varnish. During this period we have acquired a knowledge not only of Varnish, but of the varied needs of varnish consumers that nothing but time can impart, and have also learned how to cater successfully to every varnish want.

Our experience belongs to those who use and sell Berry Brothers' Varnishes.

Safest goods to handle, surest and most reliable goods to use.

WRITE FOR CATALOGUE.

Berry Brothers
 LIMITED

WALKERVILLE, ONT.





"All things come



to him who waits"



Beware of attempts at substitution. Ask for the C. P. Co.'s Green.

The CANADA PAINT CO.'s Paris Green is Death to the Bug.

Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

English Paris Green—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

Window Glass.

MONTREAL.

There is no change in prices. Business is active, and we again quote as follows: First break, 50 feet, \$1.70; second break, \$1.80 for 50 feet. First break, 100 feet, \$3.25; second break, \$3.45; third break, \$3.95; fourth break, \$4.20.

TORONTO.

A good trade is being done in window glass. Prices are unchanged. We quote nominally as follows: Star, first break at \$3.30 per 100 feet, and Double Diamond, first break, at \$5.10. Discount, 15 and 20 per cent.

Testing Lubricating Oils.

IN reply to an inquirer, an exchange gives the following directions for testing lubricating oils:

"It is not very easy to give any simple directions for the testing of lubricating oils. The whole question of lubricants is complicated in the extreme, and the circumstances in which they are used are so various that simplicity is out of the question. There are machines made for testing the actual behavior of oils under given conditions of temperature pressure, speed of revolution, nature of bearing, etc. If subscriber has decided upon the specific gravity, viscosity, and

flash-point which he wants in the oil which he is about to use, then he can test for these qualities as follows:

"Specific Gravity—Raise the temperature of the oil to 60 degrees Fahr., or 15 degrees C., and use the ordinary weighted bulb which stands in water and shows 1,000.

"Viscosity—Fill a glass tube of small diameter with a given quantity of oil, and note how many seconds it takes to drop out. Then, after cleaning the tube, fill it with refined English rape oil, and take a note of the corresponding time. The viscosity of rape oil being taken as 100, the proportion between the two can thus be calculated. Viscosity, however, varies in lubricating value, it depends upon cohesion and adhesion—cohesion between the particles of the oil itself, and adhesion to any other body with which it comes in contact.

"Flash-point—To test for this, take a small porcelain or copper vessel capable of holding a little more than two ounces of the fluid, nearly fill it with oil, and fix it over a Bunsen burner; place a thermometer in the oil in such a position that the bulb does not touch the side or bottom of the vessel, but is covered with the oil, and at the same time can be easily read. Watch the rise of temperature, and for every two or three degrees apply a light near the surface of the oil. When the flash-point is reached a blue flame will shoot over the surface of the oil and go out again.

"Fire-test—To arrive at the fire-test the heating process must be continued until the blue flame does not flash any longer, but burns steadily.

"Both specific gravity and viscosity may be obtained in various ways. If they are obtained by the use of fatty oils such as lardine, thickened rape, castor oil, etc., then it may be needful to test for free fatty acids, for if these are present in any quantity the oil is likely to damage the machinery, especially in the case of the cylinder oils.

"Test for Acid—Make a solution of phenol-phthalein, say as much of the chemical as will lie heaped on a six-pence, dissolve in six ounces of methylated spirit. Add a few drops of caustic soda until the liquor is of a red tint. Put some of the oil into a bottle and add a small quantity of the testing liquor, and shake it well. If acid is present the red color will disappear. Litmus paper is of no use as a test for acid in oil."

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size. Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street

THE ACKNOWLEDGED
STANDARD**SOLARINE**

High-grade Liquid Metal Polish. White and black forms. Both are unsurpassed. Start it in your town. It brings the business. For prices, etc., address

SOLARINE DEPOT, TORONTO.

Do you use a

**Roller
Awning?**

If not, why not? We make the best roller awning in Canada. We can operate a 60-foot awning on one roller from one end easily and safely. Write or call for particulars. The best is none too good for you.

**WM. BARTLETT & SON**
Tents, Awnings and Flags

16 Adelaide St. West,

TORONTO.

McCaskill, Dougall & Co.**Manufacturers**

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.**GLUES AGAIN**Our IMITATION FRENCH MEDAL
GLUES are of such high class

and are so suitable for Export that we would like to quote you. Export trade in this line is growing rapidly, and we pack in casks or cases as preferred. Quality unrivalled.

GROVE CHEMICAL CO., LTD., Appley Bridge, Lancashire, Eng.**We Have the Glass You Want**

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO

MONTREAL

LONDON

OTTAWA

WINNIPEG.

**Just About Our Paints**

We ask you for a first order, and if we get it we are confident that you will ask us for the second. Your customers will insist on it. Write for color cards and particulars.

P. D. DODS & CO., Montreal, Toronto, Vancouver**Flintcoat Stain Floor Finish.**

Stains and finishes at one operation. A combined stain and finish for floors and all interior woodwork. Works equally well on either hard or soft woods. Not affected by hot or cold water or soap. Excellent for old furniture, linoleums and wainscotings.

A line with a wide range of users.

Gallons, half-gallons, quarts, pints, half-pints.

SEND FOR PRICES.

STANDARD PAINT & VARNISH CO., Limited
WINDSOR, ONTARIO.

STOVES AND TINWARE.

Where Are the Tinnerns' Apprentices?

WHY is it, in this age of prosperity, that there are so few young men being brought up to the trade of their fathers? True it is, that tinware is being supplanted to a great extent by enamelled and agate ware, and tinware is turned out largely by machinery, yet there are as many openings to-day for the young man of application as ever. There is a continual demand for steady young tinsmiths, principally in a new country. It is to the west that the young man to-day looks with ambition.

The young man who goes out to Manitoba or the Northwest to fill a position where there are so many vacancies, stands in the way of making progress, the result of a good start, whereas there would be little possibility of his getting a start without such knowledge.

There are new towns opening out continually in the West, and he who will start in a new field, if of a progressive spirit, is bound to finally be in business for himself, as the wages commanded in that country are such that the thrifty can save and with a small amount of capital start up in business, and thus be independent.

We continually hear of young fellows who go out with no more than their railway fare, but with a knowledge of this work, who in a very few years have become independently well off. It is said that opportunity comes to all, and that if we are ready for the opportunity the ultimate outcome is success.

OBSERVER.

Hamilton, June, 1904.

Something Novel in Coal Heaters.

READERS of this paper will be pleased to read some particulars of the latest production of the young Brantford firm, "Telephone City Stoves, Limited." The new stove is a coal burning heater, and as will be seen from the accompanying illustration, is fitted with an outer top-draft tube, the same as on the wood heater already described in our columns.

The aim has been to furnish a low-priced stove, with all the practical

working qualities and conveniences of a high-priced stove, and judging from appearances, this end has been achieved.

In addition to other features, the Telephone City Coal Heater has a shaking draw centre grate, with the maximum space for air of the full size of the fire pot. The top of the stove is instantly detachable, allowing an easy change of fire pots. The fire pot is heavy and capacious. By an ingenious contrivance



the smoke and heat are compelled to pass around the entire stove, compelling perfect combustion, and giving instant and perfect radiating efficiency. There is also an effective check draft; also an ash pan of good capacity.

The new claimant for favor is handsome in appearance, and winning very favorable comment from dealers who have seen it. The company are taking great care to produce a thoroughly reliable and satisfactory heater, and their success with the line of Telephone City Wood Heaters is proof that they know

what is required, and are able to give it to the trade.

Down Draft Furnace Co.

THE shareholders of the Down Draft Furnace Co., at a meeting on Tuesday evening, elected the following officers:

President—Andrew Newlands.

Vice-President—George Laird.

Sec.-Treas. and Manager—Thomas Montague.

Directors—Thomas H. Smith, John McGregor.

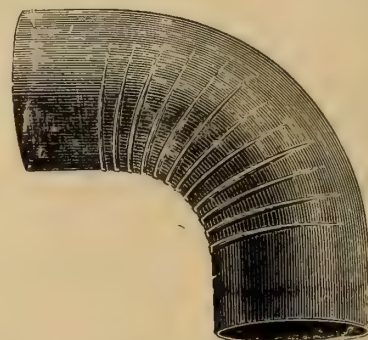
The company is closing for a splendid site on the Jackson property at the head of Beverly street, and will have a switch from the Grand Trunk. Plans are being prepared and building is likely to be started in a few weeks.

Already there has been a very large booking or orders. This week from the Norwich factory a carload of furnaces are being shipped to the Northwest. The furnace is claimed to be the best of the kind that has ever been produced. The draft comes from above and burns all the coal gas, which not only furnishes additional heat but is an aid to the combustion of the coal. Wood or hard or soft coal may be burned, and steam, hot water or hot air used for heating. The furnaces are made in four sizes suitable for all needs.

This new company has a very promising prospect, and it is likely to be soon placed among the leading industries.—Galt Reporter.

A New Line of Furnaces.

THE Western Foundry Co., Wingham, Ont., are working on patterns for a set of furnaces in four sizes, suitable for hard coal, soft coal, wood or coke, and that we ex-



Cooper's Patent Stove Pipe Elbow

ONE PIECE

Heaviest and Best Elbow on the Market.
Prices of Tin and Galvanized Elbows on Application.

Manufactured only by

E. T. Wright & Co., Hamilton, Canada.

Announcement.

On Saturday, July 23rd, immediately following the close of the Dominion Plumbers' Association session, there will be issued the annual

Heating and Plumbing

Number of **HARDWARE AND METAL**. This number will be replete with good things pertaining to heating, plumbing and metal working, and will be mailed to all **Hardware Dealers, Stove and Furnace Dealers, Tinsmiths, Plumbers, Machinists, Foundrymen, Metal Workers and Architects**, in Canada, not now on our subscription lists.

¶ As an advertising opportunity this issue is specially to be commended. Space should be reserved without delay. Rates made known on application to any office named below.

The MacLean Publishing Co., Limited

MONTREAL
232 McGill St.

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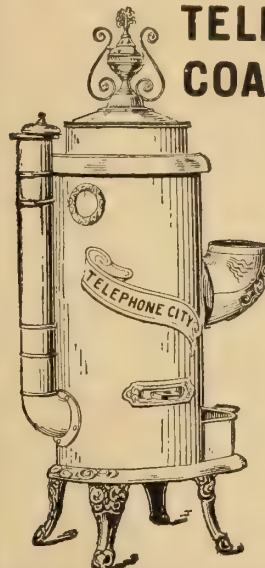
A Perfect Stove

by

A Practical Man

It took many long years of the life of a practical, thinking, purposeful Stove man to devise the stove which is known to-day as the

TELEPHONE CITY COAL HEATER



This stove is a perfect model and is for hard or soft coal. A similar line is made for wood.

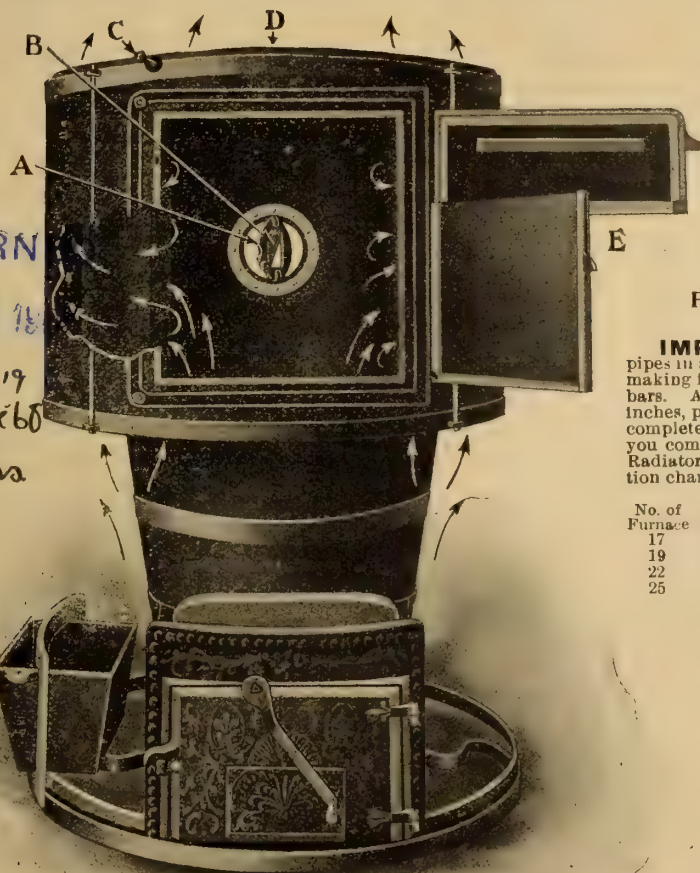
Air Tight and Top Draft

Send for full description and price list.

Manufactured only by

TELEPHONE CITY STOVES, LIMITED

Brantford, Canada



"The Kelly" Warm Air Furnace

Coal or Wood

Fully Guaranteed.

Thousands in Use.

IMPORTANT FEATURES—Low set, giving ample elevation to pipes in shallow basements. Bottom casting ring, is made solid to ash pit, making furnace easy to set up. Grate bars consists of four heavy triangular bars. Any section can be easily removed. Double feed door, size 14 x 14½ inches, permits of using large chunks of wood as fuel. Automatic gas damper, completely prevents any danger from gas explosion. Direct draft damper, gives you complete control of the fire. Dust flue, carries off all dust from ash pit. Radiator, is large and made of heavy steel plate and cast iron. Large combustion chamber. Reversible fire travel. Burns any kind of coal or wood.

No. of Furnace	Size of Fire Pot	Height of Furnace	Size of Smoke Collar	Weight	Heating Capacity
17	17 ins.	44 ins.	7 ins.	600 lbs.	7,000 to 12,000 cubic feet
19	19 ins.	45 ins.	7 ins.	700 lbs.	10,000 to 20,000 cubic feet
22	22 ins.	47 ins.	8 ins.	800 lbs.	15,000 to 28,000 cubic feet
25	25 ins.	49 ins.	8 ins.	900 lbs.	25,000 to 40,000 cubic feet

The No. 17 "Kelly" is just the thing for small houses or cottages; and can be installed complete, at a very low cost.

Dealer agents wanted. Send for prices. Don't leave your orders till too late in the season.

GUELPH FOUNDRY CO. Limited Guelph, Ont.

E. G. LOW & CO., Agents, Winnipeg, Man.

RETURN

JUN 27 1904

Cut Book 19

Page 68

Ans

Standard Technical Works

Books Written for the
Metal Merchant or
the Metal Worker.

A Manual of Mechanical Drawing.

By Philip D. Johnston: 65 full page plates and 2 folding plates, with full text and 134 illustrations; cloth.....\$2 00

Domestic Electrical Work.

By W. A. Wittbecker. How to wire buildings for bells, alarms, annunciators, and gas lighting from batteries. 55 pages, illustrated; paper, 25c.; cloth.....50c.

Ladd's Discount Book.

By W. J. Ladd, showing net of any sum at all discounts; cloth, \$3.00; double indexed.....\$4.00

Blue Print Making.

A pamphlet. Directions for Constructing and Printing Frame, Preparing the Paper and Making Prints of Various Kinds. 28 pages.....25c.

Architects' Handbook on Cements.

By Addison H. Clarke. Specifications for mixing and using cements. 96 pages....\$1.00

Metallurgy of Cast Iron.

By Thos. D. West. Showing processes involved in its treatment, chemically and physically, from the blast furnace, through the foundry, to the testing machine. 627 pages, 153 illustrations....\$3.00

Galvanizing and Tinning.

By W. T. Flanders. Coating with tin and zinc; also tinning gray iron castings....\$2.00

Practical Plating and Polishing.

Best and Most Approved Methods of Preparing and Cleaning all Metals for Electro-Plating and Polishing. 114 pages, illustrated.....80c.

New Metal Worker Pattern Book.

By Geo. W. Kittredge. Pattern cutting as applied to all branches of sheet metal work, 430 pages, 744 illustrations.....\$5.00

Tinners' Helper and Pattern Book.

By H. K. Vosburgh. Rules, diagrams, tables, 123 pages, 53 figures.....\$1.00

Roofing, Cornice and Skylight Manual.

Laying flat and standing seam roofing, cornice shop practice and skylight construction, 175 pages, 170 illustrations and 13 plates.....\$1.50

Furnace Heating.

By Wm. G. Snow. Comprehensive treatise on warming buildings with hot air, with appendix on furnace fittings, 170 pages, 90 illustrations, cloth.....\$1.50

Plumbing Problems.

House drainage and plumbing, 244 pages, 146 illustrations.....\$1 50

Practical Hints on Joint Wiping.

For beginners in plumbing, 66 pages.....25c.

Enquiries for above books should be
sent to The Editor

HARDWARE AND METAL,

Montreal

Toronto

pect to have the first size ready for the market in about two weeks' time, and the balance by August 1. Their capacity will be from 10,000 to 60,000 cubic feet, and as the furnace is a low one, being especially adapted for low cellars, it is bound to be a favorite with the furnace trade, as it is constructed along the most modern and scientific lines, and embraces every known improvement up to the present date in furnace construction.

The fire door is exceptionally large, making the use of rough wood very easy. The manner of repairing and removing the grate bars is so unique and so simple as to make the furnace in this one feature alone superior to anything on the market. It will be known in name by the "Red Hot Huron," and it will be advisable for any of the trade who are figuring on their furnace requirements for this Fall to secure illustrations and prices on these furnaces. The firm guarantee to furnish them with a furnace which in economy of fuel, satisfactory working qualities, and ease of working is up to the highest standard. It will be sold at a price that will be not only interesting, but profitable to the dealer.

American Supply Men to Meet.

THE next important gathering of tradesmen connected with lines in which our readers are interested is the joint meeting of the Supply Association at Niagara Falls next Tuesday. It is only a few years since the work of proving to men of diverse interests that in united action there was advantage and profit was taken up by some of the more courageous and enthusiastic workers in the trade. The value of the idea and the good result when carried out have long since been demonstrated, so that it should be no longer necessary to converse or correspond with tradesmen in these lines to secure their hearty co-operation. It is pleasing to note that the reports from the various associations indicate that the members show more interest than has heretofore been customary and that the Niagara Falls meeting promises to show the largest attendance of tradesmen in these lines that has ever been found at any of the meetings of the association. This is the proper spirit. Even though some sacrifice may be necessary, members of the trade should make it a point to be present at their association meetings, so that they can secure at first hand all information as to the policy which the majority consider expedient, and also to aid in the

advancement of such ideas as are presented for the general good of the trade as a whole.—Metal Worker.

Something New in Heaters.

A new heater is to be manufactured at St. Joseph, Mo., says the Metal Worker. It will produce heat and power without dirt accompanying the use of coal, and, it is said by the owners, at half the expense. A working model is on exhibition in the First National Bank building, St. Joseph, and the demonstrations given there indicate that it covers a long felt want. The power used to produce the friction which generates the heat in the cylindrical friction heater may be water, wind, gas, gasoline or electricity. By a special attachment for the axle of vehicles heating systems may be economically installed in steam and electric cars and foot warmers in carriages and automobiles.

ALEX. McARTHUR & CO.

THIS prominent Montreal firm are nearing the quarter century mark in their business, and in a letter sent recently to their customers they have expressed their thanks for the liberal support which they have been accorded during these years. The letter calls attention to the fact that in 1903 Time's ravages bore heavily on this firm by the death of its founder, the late Alex. McArthur. Then, in September last, their felt factory at Hochelaga was swept out of existence by a disastrous fire.

To meet the changed conditions their business was recently converted into a joint stock company and incorporated under the name of Alex. McArthur & Co., Limited, with ample capital and the retention of the old staff. A new felt factory and tar distillery and saturating plant have been erected and equipped with the most up-to-date machinery, and all the best known appliances adapted to turning out first-class paper and felt for building requirements.

At their Joliette paper mills are manufactured, as before, their own special brands of "sheathing" and "cyclone," as well as building papers of all descriptions. They also manufacture all kinds of manila, fibres, and grey wrappings, news-prints and wall papers.

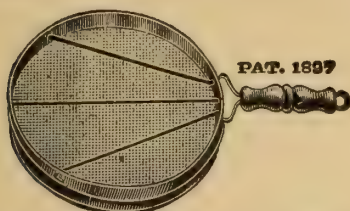
Since its organization years ago the motto of this firm has been: "Our customers are our friends, and to thy friends hold fast." The steady increase in their business is proof that their efforts in this direction have been appreciated.

Have you
tried it?
Tried what?
**SELLING
MANTELS.**



This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
76 YORK ST., TORONTO.



PAT. 1897

The FAIRGRIEVE GAS TOASTER

Retails at 25c. The only Toaster guaranteed to toast on
gas, gasoline or blue flame oil stoves without taste or smell.
Write for prices.

THE FAIRGRIEVE MAN'FG. CO.,
295 COLLEGE ST., TORONTO.

U. S. Branch: 289 Jefferson Ave., DETROIT
Agents for Great Britain: Heine, Solly & Co., Sutton
House, 2 Old Street, London, E.C.

The Hamilton Steel & Iron Company

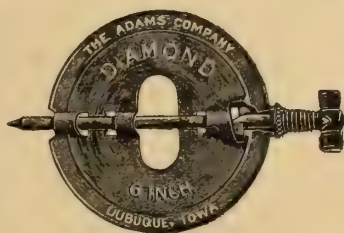
LIMITED

HAMILTON, - CANADA.

OPEN HEARTH

STEEL CASTINGS
OF ANY WEIGHT.

DIAMOND STOVE PIPE DAMPER AND CLIP.



U. S. Patent June 25th, 1895.
Canadian Pat. Dec. 13th, 1894.

Sold by Jobbers of - - -

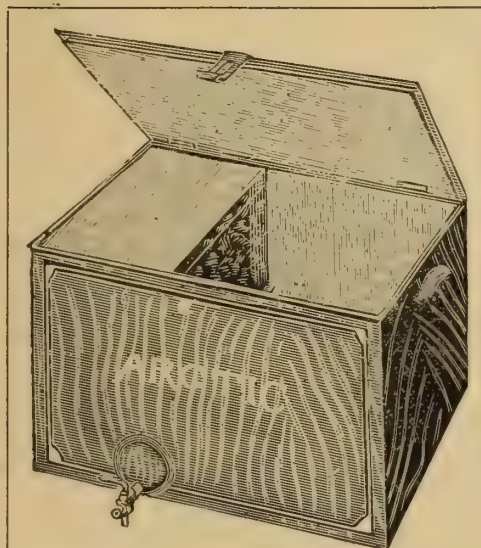
**HARDWARE
TINWARE
and STOVES,**

for furnace pipe, to support
the sheet steel blade.



Manufactured by **THE ADAMS COMPANY, Dubuque, Iowa, U.S.A.**
TAYLOR-FORBES CO., Limited, Guelph, Ontario.

The Arctic Ice Chest



Made in three sizes—

No. 20..... 19 x 13 $\frac{1}{4}$ x 13 $\frac{1}{4}$
No. 30..... 23 x 16 x 16
No. 40..... 27 x 19 $\frac{1}{4}$ x 19 $\frac{1}{4}$

Refrigerator Made on Scientific Principles.

Handy and Compact.

Lined with Galvanized Iron.

Japanned in Oak and Ornamented.

Silver-Plated Tap.

Suitable for Yachts, Picnic Parties, Summer Residences, etc

**A Boon in the Sick Room. Keeps the food for the
invalid Fresh and Sweet at all times.**

PRICES ON APPLICATION TO

The THOS. DAVIDSON MFG. CO. Limited. . . . MONTREAL.

HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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President—B. Noble.
Vice-President—Wm. Smith.
Secretary-Treasurer—E. H. Russell.

The Value of a Connection.

"IF it were not for the connection I have taken so many years to work up, and which is now so valuable to me, I would go west."

The opening part of the above remark is particularly worthy of note. In a casual way the speaker manifested a recognition of the most valuable asset in his business—his connection.

Connection in the heating trade is not built up in a day or a year. It is a development resulting from enterprising and faithful service, from the reputation and confidence won by years of reliable work. Once such a connection is formed the heating contractor has a number of friends and customers whom he can hold against any competition, and who will depend almost entirely upon his judgment, not only as to the best way of doing a job, but also as to the comparative value of various goods which might be installed.

The heating contractor, even though he should confine his attention to furnace work, should be so equipped with knowledge of his business that he can answer any questions raised by his customer. If there is more than one way of doing a job he should be in a position to explain why he favors the plan he proposes to follow. As there is more than one kind of furnace or radiator which he might use he should be ready to advise one particular kind and to give his reasons for so doing. Above all, he should know how to instal the system he intends using so that after the job is finished it will be a credit to him as well as to the manufacturers of the goods.

Knowledge is power. And one of the greatest proofs of its power is the confidence in one's ability it instils in customers as well as members of the trade.

It can truly be said that the Canadian plumbers and heating contractors are, as a body, seekers after knowledge. They study their business, and in large measure have the confidence of the public. Thus the value of their personal connection is a great asset. Some master workmen have not such a knowledge of their business. But in the majority of cases the rule applies.

This condition should, in fact, be taken into full consideration by the manufacturers. It may be laid down as a rule that if the manufacturers of plumbing goods, radiators, furnaces, registers, etc., convince the trade of the merit of their line: they need not worry over what the public may think. They may leave that to the local agents.

The Advantage of Discussing.

WHEN the members of any association meet for the reading and discussion of technical papers they are, for the time being, fulfilling what should be the first object of their organization, says the Plumbers' Trade Journal. At such times there should be no professional secrets, no petty jealousies, no envyings. If one member tells of obstacles that he has not been able to overcome, a dozen other members should be on their feet ready to give him helpful advice out of their own experience. One serious drawback to the development of the idea of presenting technical papers on sanitary science before the plumbers' conventions finds expression in a dislike, in fact, in some cases, in a positive refusal to divulge certain methods which are assumed to be known only to the one employing them. When it is considered that such individuals are competing with a large number of brother plumbers who are equally successful in the practice of their calling, the amount of damage that would be done to their business interests by the publication of their particular methods must, in general, be so slight as to be impossible of measurement.

Noisy Water Pipes.

In reply to an enquirer an exchange gives the following advice regarding noisy water pipes: "Almost invariably, when water pipes become noisy under the conditions described, it is due to the fact that there is a loose part in some particular portion of the piping system; it may be the disk or washer or the screw holding the disk in a faucet basin cock or water closet supply cock. When the faucet is open there is a variation in the pressure which sets the loose part in motion, making the noise mentioned and permitting it to extend wherever the piping is carried.

An English Author in Toronto.

Mr. Walter Jones, M.I. Mech. E., M.I.H.V.S., of Jones & Atwood, Stourbridge, England, was the guest of Mr. W. H. Carriek, of the Gurney Foundry Co., Toronto, this week. Mr. Jones, who has been a member of the party of English engineers who have toured the United States, is the author of several technical books on heating subjects, which are considered standard works by the Canadian trade.

WINDOW GLASS

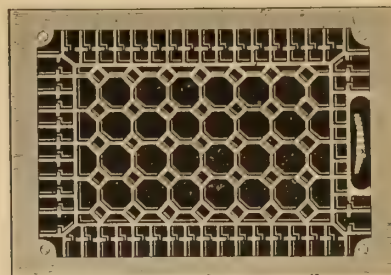
Large stocks are now arriving and assortments are well maintained. Glass is in splendid condition. Send us your specification now, and have your order filled before assortments are depleted. The brand is good and the price is right.

A. Ramsay & Son,
MONTREAL.

EST'D
1842

GLASS
IMPORTERS

"REGISTERS OF QUALITY"



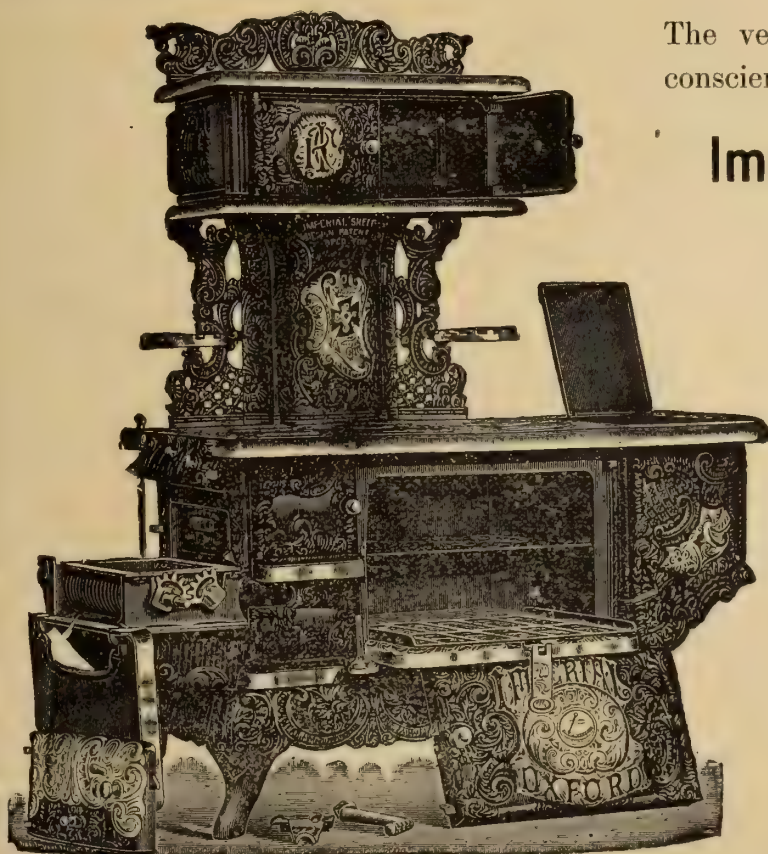
MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,
BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular Illustrating our SIDE WALL REGISTERS on application.



The very best ideas, backed up by skill and conscientious work, produced the

Imperial Oxford Range

the perfect home - cooking apparatus. It is easier to sell than any other range on the market because it is better. It stays sold because it gives satisfaction every day it is used.

If you want to sell the best range on the market write us for full particulars.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., LIMITED
CALGARY, ALTA.

Plumbing and Heating Notes.

The plumbing firm of E. C. Mount & Co., Westmount, Montreal, have assigned E. C. Mount has also assigned his interest in the business of Mount Bros. E. C. Mount has liabilities to the amount of \$20,000.

The James Morrison Brass Mfg. Co., Toronto, are offering the trade a wide range of bathroom fixtures, which is well worthy of the attention of the trade. This line is made up of small articles, which sell freely and at a good margin, and consequently is one that every retailer should have on hand.

E. G. Manhire, practical sanitarian, of St. Catharine street west, Montreal, has several large contracts on hand for heating and plumbing. These include the new McGill Y.M.C.A., the Orkin building on Notre Dame and Recollet streets, Stroud's warehouse on St. Paul street, and several others.

The Toronto plumbing fraternity have again turned their attention to their favorite Summer pastime, baseball. The master plumbers are getting a team together for a "hand to hand tussle" with their friends and rivals, the team which holds up the reputation and dignity of the supply houses. The first game is to be played at the Woodbine on Saturday.

Great preparations are being made for the National Master Plumbers', Steam and Gasfitters' Association Convention, to be held in Room 1, Temple Building, on July 20, 21 and 22. The Toronto association have appointed P. Jessamine, A. Purdy, J. J. McKittrick, Geo. Clapperton, J. E. Fullerton, F. Armstrong and P. Hayes a committee to entertain the visiting delegates, and have voted sufficient funds to enable them to do so in the proper manner.

Building Notes.

A town hall is being built in Yorktown, Assa.

A new Presbyterian manse is to be erected in Rathwell, Man.

Winnipeg is to have a modern fire-proof hotel structure before long.

Wm. Scott is erecting a large hotel at Blind River, Algoma District, Ont.

F. F. Jones, Vancouver, is erecting a residence on Beach avenue, to cost \$5,000.

A two-storey brick veneer schoolhouse is to be erected in Copleston, Ont.

Tenders are being called for the erection of the new postoffice in Wingham, Ont.

The Intercolonial Railway are erecting brick office and stores buildings in St. John, N.B.

A two-storey residence is being erected in New Glasgow, N.S., for Dr. R. J. McDonald.

Plans have been prepared for the new schoolhouse in Edmonton. The cost of the building will be \$33,000.

The Hamilton Gas Light Co., Hamilton, are building a new steel and iron coal shed on North Park street.

A new \$25,000 church is to be erected by the St. Paul's Presbyterian Church congregation on Bathurst street, Toronto.

The large building for the departmental store of T. Lindsay & Co., on Wellington and Rideau streets, Ottawa, has been commenced.

The Territorial Educational Department have authorized the Arcola, Assa, School Board to issue debentures for \$12,000 to build a schoolhouse.

At the recent meeting of the directors of the New Brunswick Telephone Co., at Fredericton, it was decided that new exchange buildings will be erected in Moncton and Fredericton in the near future.

For some time Galt, Ont., has been very much in need of residences for the working class. A company is now being organized in Galt to carry on a building and contracting business, under the name of the Galt Building and Construction Co., Ltd. The stock is being subscribed by the residents of Galt, and incorporation will be applied for from the Ontario Government.

Building Permits.**MONTREAL.**

L. Primeau, 555 Beaudry street, four dwellings, \$6,040.

Hormidas Rochon, St. Denis street, one dwelling, \$1,800.

M. Boulne, 167 Manufacturers' street, two dwellings, \$2,000.

J. N. Cartier, Park avenue, three dwellings, \$8,000.

J. B. Gappa, Duquett street, four dwellings, \$2,000.

Record Foundry, Mill Point, alteration on building, \$3,000.

E. Renaud, alteration building at 317a Rachel street, \$1,000.

Mark Workman, 1888 Notre Dame street, four stores, \$18,000.

J. D. Joubert, alteration on dwelling at 13 St. Louis square, \$3,000.

Dr. E. P. Chagnon, 1460-64 St. Catherine street, two dwellings and two stores, \$2,000.

TORONTO.

Kilgour Bros., office and warehouse, \$10,000.

G. M. Miller, dwelling on Lampton avenue, \$4,000.

Adam Henthorne, dwelling on Victor avenue, \$1,600.

Foster Taylor, dwelling on Howland avenue, \$3,000.

Mrs. Davis, dwelling on Woosley street, \$4,000.

Mr. Parks, dwelling on Dovercourt road, \$5,000.

Ellis & Laistum, dwelling on Albany avenue, \$5,500.

H. Webb Co., factory on Buchanan street, \$15,000.

Davis & Henderson, warehouse and factory, \$18,000.

Cameron Husband, dwelling on Chestnut Park road, \$4,300.

A. Buckner, dwellings at 864 and 866 Queen street east, \$2,000.

The Old Folks' Home, brick addition, University avenue, \$2,500.

A. T. Reid, brick warehouse on King and Duncan streets, \$30,000.

Frederick Driver, brick addition to No. 325 Jarvis street, \$1,000.

BRANDON, MAN.

Robt. Purdon, residence.

Brandon Club, Eleventh street.

H. Cater, stable, Ninth street.

L. Arnason, residence, Second street.

Walter Cater, residence, Ninth street.

D. Berry, residence, Fifteenth street.

J. A. Twiss, residence, Ninth street.

R. Sword, four houses, Russell street.

Sarah Ryder, residence, First street.

Geo. Sawyer, residence, Seventh street.

T. A. Dickson, residence, Third street.

Jos. Wells, boarding house, First street.

M. Gillespie, residence, Thirteenth street.

A. J. Shether, residence, Thirteenth street.

H. A. Wood, residence, Twelfth street.

Fred Schenk, residence, Fourteenth street.

M. Gillespie, residence, Thirteenth street.

Geo. F. Pyne, residence, Eighth street.

J. C. Knight, residence, Tenth street.

S. R. Wallace, residence, Eleventh street.

T. J. Somerville, residence, Rosser avenue.

Murdock Bros., warehouse, Pacific avenue.

Mrs. W. D. Smith, frame house, Fourth street.

Redemptorist Fathers, brick improvement, Fourth street.

Hunter Smith, metal clad warehouse, Rosser avenue.

Currie & McEachern, three residences, Princess.

P-H



DO YOU USE OR SELL NIPPLES AND COUPLINGS?

There are differences in different makers' goods. Not all are equally good. Some are hard to work with—not so those of our manufacture

PIPE THAT IS PIPE

Ours Pay You to Use

SEND FOR DESCRIPTIVE CIRCULAR AND PRICE LIST

Page-Hersey Iron & Tube Co., Limited, Guelph, Can.

MAKERS OF WROUGHT IRON PIPE

Every buyer wants "Remanit" because it is the best pipe covering made. It fits pipes, elbows and T's, and is wonderfully durable. Write for details of this wonderful pipe covering.

Jas. Morrison Brass Mfg. Co. Limited,
TORONTO, ONT.



Remanit

"Ignito"

Self - Lighting Incandescent Gas Mantles.

No match required. Always ready, and no gas burning when not in use.

The novel light of this scientific age.

All the convenience of Electric Light at less than one third the cost.



Agents and representatives wanted in every town using gas.

Send us 90c. for sample burner mantle and globe complete, postage prepaid.

SOLE SELLING AGENTS FOR CANADA

THE INTERNATIONAL GAS APPLIANCE CO., Limited
164 Bay St., TORONTO, CANADA.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

At a meeting of the Montreal Chamber de Commerce the advisability of elevated railways for the wharf, for the improvement of shipping from the new sheds, was discussed, a favorable opinion being manifested. Mayor Laporte favored the proposal, which would mean an outlay of about \$60,000.

The Massey-Harris Co., Toronto, are applying to the city council for permission to extend their works across Strachan avenue. It is proposed by the company to erect a large new warehouse, thereby increasing the output of their factory by one-fifth. The Civic Works Committee look favorably upon the proposal.

F. H. Nichols and W. H. Crowe, both of Superior, Wis., are organizing a company in Stratford for the purpose of establishing a chair factory there. They ask from the city exemption from taxation for ten years, and a grant of \$1,000 for the purchase of a site. The city favors the proposition. The company will be capitalized at \$60,000.

The planing mill of Geo. White, Parry Sound, is now completed. The machines comprise a matcher, rip saw, surface planer, hardwood floor machine, a cut-off saw, a sticker for making sashes and doors, combination saw table, buzz planer, power morticer, tenoning machine, two turning lathes, a band saw and sand-paper machine.

A company has been formed called the Q. & C. Bonanza Rail Joint Co., to manufacture rail joints in Canada, with headquarters at Montreal. The first annual meeting of this company was held in Montreal on June 9, at which the following officers were elected: President, Mr. Norman J. Holden, of Montreal; vice-president, Mr. Edgar M. Smith, of New York; secretary-treasurer, Mr. Charles F. Quincy, Chicago.

Fire has done damage to property in Rat Portage to the extent of \$150,000. The Rat Portage Lumber Co. are the heaviest losers. Their planing mill and machinery, their sash and door factory,

with machinery; their dry kiln, and several small buildings, were all destroyed. Their total loss is estimated at \$125,000, with insurance of \$65,000. Thirteen houses were destroyed, and three C.P.R. freight cars.

Those interested in the iron industry at Hunter's Island, Gunflint Lake and Atikokan, all in New Ontario, are considering the proposition of establishing an iron and copper ore smelter at Fort Frances. If one is established the electric process will be employed. At the present time all ore goes to Cleveland, Ohio, to be smelted. Mackenzie & Mann are the largest shareholders of iron property in the district, and the establishment of such an industry at Fort Frances would be of great interest to them.

The Montreal and Boston Consolidated Mining Co. has been incorporated with a capital of \$7,500,000. Of this \$6,500,000 will be issued for the different properties of the company and to provide a working capital of \$1,500,000, leaving \$1,000,000 of treasury stock. The consolidation includes the Montreal and Boston Copper Co., the Dominion Copper Co., Morrison Mines, the Atherstan and Jackpot gold mines, and a three-quarter interest in the Emma mine. The different mines are calculated to be sufficient to furnish 1,200 tons of ore per day.

The new saw mill of the Rainy River Lumber Co., Rainy River, Ont., has a capacity of 200,000 feet per day. The plant of the company consists of the saw mill and a planing mill driven from separate power houses. In connection with the saw mill there is a lath and shingle mill. The power plant of the saw mill contains a battery of six boilers and a 1,100 horse power Corliss type engine. The power plant of the planing mill is equipped with a battery of two boilers and a Corliss type engine. The planing mill itself is equipped with 13 large and modern wood working machines. The plant is a credit to the industrial enterprise of New Ontario.

D. W. Higgins, president of the British Columbia Loggers' Association,

makes the announcement that the loggers on the Pacific coast have decided to cease operations indefinitely. The trouble is the same one the loggers have been complaining of for the past three years. An order-in-council passed by the Government prevents operators from exporting to the United States logs cut from lands held under a special license, and prices paid by the mills of British Columbia are not sufficiently high to enable loggers to meet expenses. Over 1,300 men will be thrown out of employment; lands valued at \$300,000 will be left idle, and a monthly turn-over of \$500,000 will cease.

NOTES.

Fire did damage to the Gurney-Tilden works, Hamilton, recently, to the extent of \$600.

Two new brick-making machines have been added to the brick yard of A. Alsip & Co., St. Boniface, Man.

The Dominion Iron & Steel Co. are making small daily shipments of stock that has been lying in their yard.

The Down Draft Furnace Co., Galt, Ont., recently incorporated, will start the erection of their new plant in a few weeks. Thos. Montague is manager of the new company.

A company has been organized in Galt, Ont., to carry on a building and contracting business in Galt, and are applying to the Ontario Government for incorporation under the name of the Galt Building and Constructing Co., Limited.

COMPANIES INCORPORATED.

The Winnipeg Granite and Marble Co., Winnipeg; capital, \$60,000; purpose, to carry on a granite and marble business.

The Sovereign Oil Co., Limited, Comber, Ont.; capital, \$50,000; purpose, to drill and operate for petroleum oil and gas.

The Empire Elevator Co., Limited, Winnipeg; capital, \$2,000,000; purpose, to carry on an elevator and warehouse business.

The Stratford Cordage Co., Limited, Stratford, Ont.; capital, \$40,000; purpose, to manufacture twines, ropes and cordage.

The Canadian Adjustable Bearing Co., Limited, Windsor; capital, \$100,000; to manufacture and sell adjustable bearings and other specialties.

The Ronan Motor Co., Limited, Toronto; capital, \$100,000; purpose, to manufacture engines, motors, vehicles and machinery of different kinds.

The Alvinston Power Co., Limited, Alvinston, Ont.; capital, \$40,000; pur-

CHARLES BAYNES, "England.
MAKER OF THE KNUZDEN BROOK, BLACKBURN,
"CLICK-CLACK"
HACK SAW BLADES.
In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited

HANOVER, ONTARIO.

Manufacturers of **"Saugeen Brand"**
the Celebrated **OF PORTLAND CEMENT.**

Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables—Emlyn Engineering Works
"Machinery," Newport. NEWPORT, MON., ENGLAND



Will Hold Up a Shelf !

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER. NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,
New Haven, Conn., U.S.A.

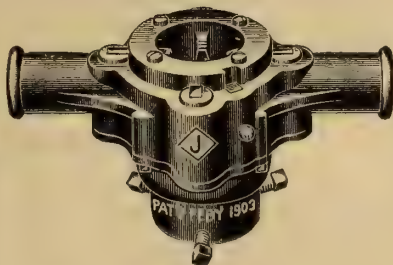
To Manufacturers' Agents

Hardware and Metal has inquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of inquirers in our various offices throughout Canada and in Great Britain without charge.

Address

Business Manager
HARDWARE AND METAL
Montreal and Toronto



It is a fact that one man with our **PATENT PIPE DIE** can easily do the work of two men with any other. Send us your address and we will explain HOW and WHY.

A. B. JARDINE & CO.

Mfrs. TAPS and DIES.

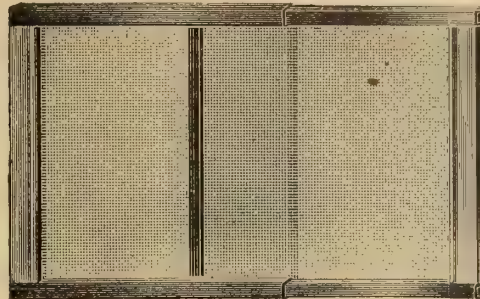
HESPELER, ONT.

PIG IRON

FOR
IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.



Canadian Patent, March 17, 1903. U. S. Patent, January 26, 1904.

IF

Our Metal Screens cost more, if they weren't *much* better than the Common Wood Screens, there might be reasons for your selling Wood Screens.

Write for circular.

C. M. Cutts & Co., Makers
Toronto Junction.



Pedlar's "Perfect" Metal Lath

CHEAP AS WOOD

Delivered to any railway station in Canada, for 10c. per square yard. Discount to dealers. Circulars and samples on request.

Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal, Que.

pose, to carry on the business of an electric light company in all its branches.

The Canadian Saddlery and Harness Mfg. Co., of Oshawa, Limited, Oshawa; capital, \$50,000; purpose, to manufacture and deal in saddlery, harness and hardware.

The Dominion Brass Works, Limited, Port Colborne, Ont.; capital, \$100,000; purpose, to manufacture and deal in valves and all other steam fitters' and plumbers' supplies.

The Rio de Janeiro Light & Power Co., Limited, Toronto; capital, \$25,000,000; purpose, to carry on the business of an electric light, heat and power company in all its branches.

LICENSES GRANTED.

The Indiana Mfg. Co., incorporated in West Virginia, U. S. A., to acquire patents and inventions upon pneumatic straw stackers, and to manufacture and sell in Ontario the stacker, provided that the company in so doing would not use a larger capital than \$40,000.

The Industrial Construction Co., incorporated in Illinois, to carry on a general contracting and construction company, provided that in so doing the company do not use a larger capital than \$40,000.

NOTES OF THE TRADE.

While renewing his subscription to Hardware and Metal last week, Mr. Rankin, of Middlemiss & Rankin, hardware merchants, at Mitchell, Ont., remarked to a representative of that journal: "We are always pleased to pay for Hardware and Metal. We should not like to be without it."

N. D. Rougvie, hardware merchant at Goderich, Ont., is giving up business in that town, and intends living at Sarina.

H. S. Howland, Sons & Co. are in receipt of a large shipment of Eley's loaded shells—all new goods, of this season's manufacture.

WEALTH OF THE BRITISH EMPIRE.

A paper on the wealth of the Empire, read by Sir Robert Giffen, K.C.B., before the British Association, gives the following figures for the United Kingdom: Aggregate income, \$8,500,000,000, and the aggregate wealth as \$73,000,000,000. The corresponding figures for the Empire are: Income, \$15,200,000,000; wealth, \$108,000,000,000. Of our home income, \$2,280,000,000 are spent on food and drink, \$883,000,000 on dress, \$1,080,000,000 on houses, \$900,000,000 on national services, \$631,000,000 on mis-

cellaneous, including education, and \$973,000,000 on the cost of distribution.

MAKING HORSESHOES.

THE Portland Rolling Mills, of St. John, N. B., gave a very interesting and instructive demonstration on June 14, of modern methods of horseshoe manufacturing. The city blacksmiths were invited to visit the mills and see the methods of making horseshoes by machinery, and the invitation was, of course, gladly accepted as although continually handling horseshoes perhaps very few had ever seen them made in any other than the old-fashioned way at the forge.

An interesting demonstration was given of the whole process. The iron for the shoes is first rolled out in bars about 30 feet long, having the grooves cut out for the placing of the nail holes. These bars are then cut into the required lengths without heating. The pieces are next laid six in a pile and put into a heating furnace. When white hot they are taken out and put into a machine which, being fitted with a die the proper shape, catches the bar at both ends and bends it at the centre into the well known lucky shape. The next part of the process is the rolling and putting the concave on the side which comes next the hoof. This is done in a machine which works at about the rate of two shoes in three seconds and which rolls them perfectly flat and at the same time presses the under side to the required shape. Taken from here the shoes are allowed to cool and then put into the hands of the men running the machines which punch the holes for the nails. This manner of putting the nail holes in is much better than the old way as it allows the hole to be sloped in the direction which the nails must take, thus making the placing of the shoe much easier. The final handling of the shoe files off the roughness of the under side. The company are able to turn out one hundred kegs of shoes a day.

HUGE COPPER TRUST.

A deal is now under way which will involve a combination of nearly all the copper mining interests in United States, at the head of which is John D. Rockefeller. The capital of the merged companies, it is said will be \$2,500,000,000, and the purpose is to control the copper output of all the mines, with the possible exception of the Calumet and Hecla copper mine, of Michigan. Senator Clark's United Verde and Montana properties and those of F. A. Heinze in Montana are said to be included, as also are the principal mining companies of Colorado, Utah and California.

Memorial Windows

UNEXCELLED
DOMESTIC ART GLASS

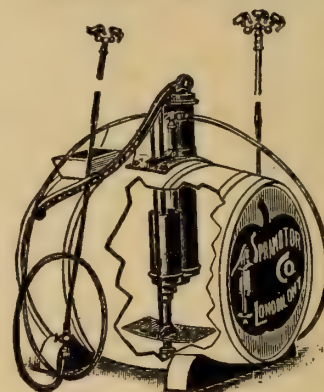
H. E. St. George, London, Ont

Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

U.S. and Foreign Patents, Caveats, Copyrights and Trade Marks. Military and Naval Inventions a specialty. Address,
Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP
Warren White Sulphur Springs,
Totten P.O., Virginia.



THE SPRAMOTOR

is recognized by the users as the most durable and efficient apparatus yet invented, for the

Prevention of blight and bugs on fruit and potatoes.

For the destruction of wild mustard in the grain crops without injury to the grain, and for

The painting of buildings.

Has been awarded First Place by the Canadian Government in actual contest, and

The Gold Medal at the Pan-American.

The Trade fully protected.

Write for particulars and discounts. Terms liberal.

THE SPRAMOTOR CO.,

65-70 King St.,

LONDON, CAN.



**METAL SKYLIGHTS and
WINDOW FRAMES**

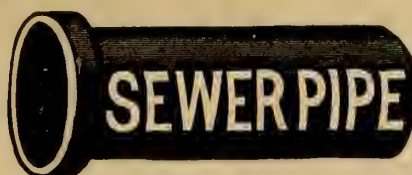
Glazed with FIREPROOF GLASS.

**CORRUGATED IRON
and FIREPROOF DOORS**

**ROOFINGS, CORNICES
and CEILINGS**

**A. B. ORMSBY LIMITED,
MANUFACTURERS AND CONTRACTORS,
Cor. Queen and George Streets,
TORONTO, ONT.**

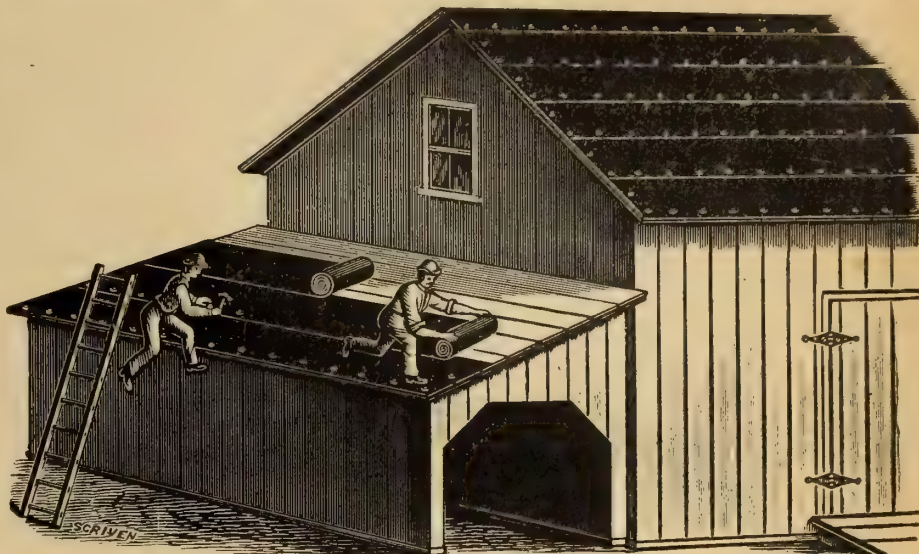
... FULL STOCK ...

Salt Glazed VitrifiedDouble Strength Culvert Pipe
a Specialty.**THE CANADIAN SEWER PIPE CO.**HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.**PORTLAND CEMENTS**Best German, Belgian and English
Brands.FIRE BRICKS
FIRE CLAY
FLUE LININGS
DRAIN PIPES
HARD WALL PLASTER
CALCINED PLASTER
WHEELBARROWS
MORTAR STAINS.A Full Stock of Builders' and Con-
tractors' Supplies.**W. McNALLY & CO.**

40 to 52 McGill St (Cor. Wellington St.)

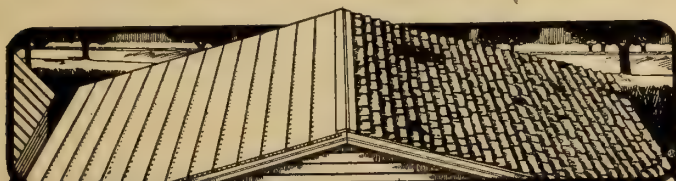
MONTREAL.

Write for our quotations.

Permanent, Economical,
Handsome.**Arrow Brand Asphalt Ready Roofing.**Comes in rolls, ready to lay, with nails and cement.
All ready covered with white sea gravel. No further attention after laid.**A. C. JENKING, Sole Agent,**
Room 215 Coristine Building, - MONTREAL.
Sun, Frost, Water, Fumes DO NOT affect it. Write to-day for agency.**USE MICA ROOFING**For Flat or Steep Roofs. It is Waterproof,
Fireproof, quickly and very easily laid, and
cheaper than other roofing.**HAMILTON MICA ROOFING CO.,**

60 Catherine Street North,

HAMILTON, CANADA.

CONSTRUCTION vs. DESTRUCTION.
CARE vs. CARELESSNESS.
BEST MATERIAL vs. POOR MATERIAL
REX FLINTKOTE ROOFING vs. ALL OTHER ROOFING.**REX Flintkote Roofing**
TRADE MARKThe above tells the whole story, and means to the dealer a quick-selling, business-
bringing roofing vs. the ordinary kind that never sells, because people don't want it,
and when they are persuaded to try it never come back again. If you want satisfied
customers for roofing, you should write us to-day about Rex Flintkote Roofing.

J. A. & W. BIRD & CO., 49 India Street, Boston, Mass.

Mr. Hardwareman.Do you get all you can out of the building
operations in your town?**Manufacturers**are making some good propositions on this
page; look over their advertisements and,
if you do not handle their goods, write them
asking for full particulars.**ALWAYS BE READY TO ENLARGE YOUR BUSINESS.****ATKINS HIGH-GRADE, CROSS-CUT SAWS**

OUR VICTOR, TUTTLE TOOTH AND SEGMENT GROUND SAWS ARE THE FAVORITES IN THE CAMPS

**E. C. ATKINS & CO.,**
INCORPORATED.

Factories and Home Office: INDIANAPOLIS, IND., U.S.A.

LEADING MANUFACTURERS OF HIGH-GRADE, CROSS-CUT, HAND, BAND,
CIRCULAR, HACK, BACK, WOOD AND SMALL SAWS OF ALL KINDS

Write for Catalogue and Prices

C. D. TEN EYCK, Sales Agent for Canada. Toronto Office: 30 Front St. East. Tel. Main 1896.

WALL PAPER.

JAPANESE DESIGNS.

OWING to the recognized beauties and the great possibilities in the Japanese style of decorative art, and the fact that the war has brought things Japanese into renewed favor, Japanese ideas in wall paper might well be followed out.

There was a time, several years ago, when Japanese art was popular. The Mikado was the favorite opera, and homes were filled with things Japanese. This fad died out, and conditions are now favorable for reviving this popularity along more practical lines.

There is a life-giving quality in both Japanese and Chinese art, to which decorative artists have frequently turned for inspiration, and to nothing can this art be more profitably applied than in the designing of wall paper.

PANELS IN WALL PAPER.

WOOD panelling is known to everyone, as well as panelling in stucco work, and with it in everyone's mind is connected the idea of great expense. There is, however, another method of obtaining quite a similar effect at a cost beyond the reach of few. The use of wall paper and moulding in this way is developing rapidly, and as soon as its possibilities are more widely known it will be more generally adopted.

It is in his attention to specialties, in his evident efforts to get what is new and what is best, that a merchant's reputation is built up in his town. He might go on, year after year, laying in nothing but rolls and borders of paper for the ordinary uses, and his business would never grow very large. But let him keep in touch with all the latest ideas and novel effects, and his townspeople will get into the habit of coming to him for the best goods, as well as the cheapest.

In the cut shown is given a good idea of how effective this panel treatment can be, and how simply it is worked out. For the walls there are three papers, called the "style," the portion outside the panels; the "panel," and the "border." At the top of one is a fourth paper, which is intended for the ceiling. Around the panels is a small neat moulding, which carries out accurately the panel idea.

The border is of a special kind, with the edge shaped to the pattern. This is printed in ordinary strips of border with straight edge, and afterwards cut to the pattern.

CORRESPONDENCE RESPONSIBILITY.

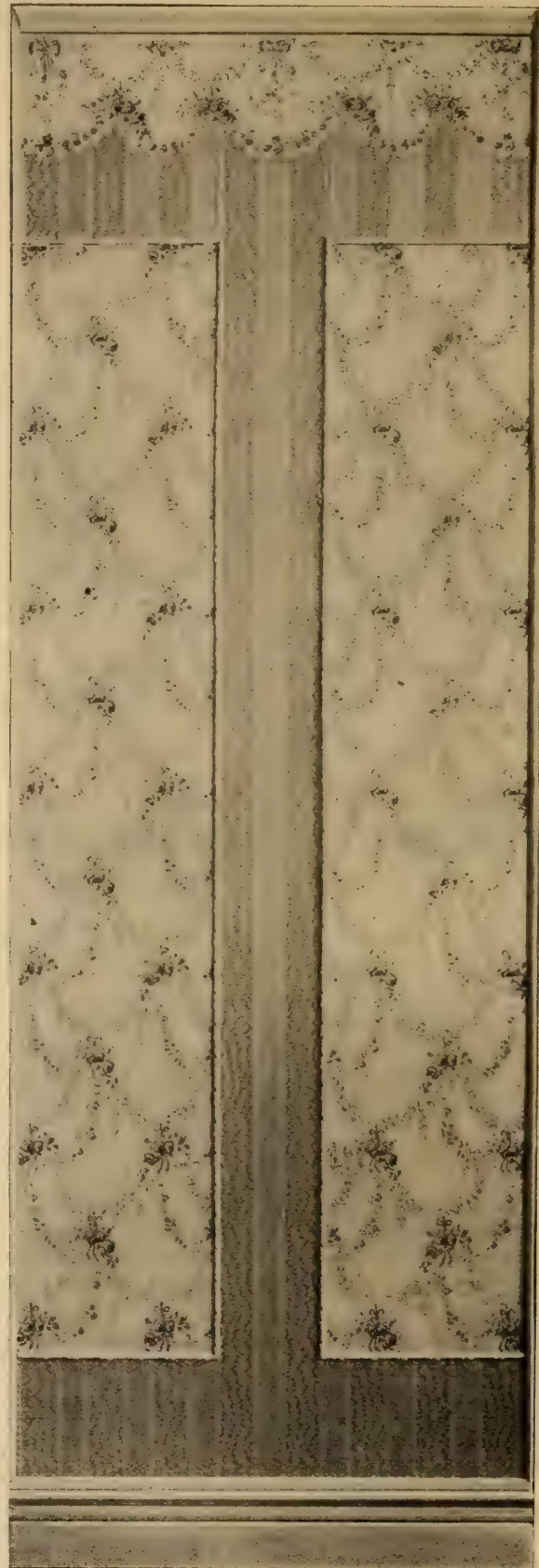
Upon those who dictate the correspondence rests a still heavier responsibility, says Profitable Advertising. This is entirely too big a subject for casual comment.

It is one of the greatest fields in any business for the exercise of intelligence and tact. Not only one's familiarity with the business itself, but one's whole knowledge of men and affairs is called into play. A man can go on for a lifetime perfecting himself in such work.

In handling a large correspondence certain self-discipline is required to give the dictation life and interest. The tendency is to degenerate into a mere machine, to use stereotyped forms and phrases.

Most business men seem incapable of putting their own personality into a letter, unless they are angry. When a man is angry he should call his stenographer and dictate freely all that he feels inclined to say, have it carefully written out, read it thoughtfully, and then tear it up. It gets the load off his chest, and at a later hour or the next day he may be better qualified to do himself justice.

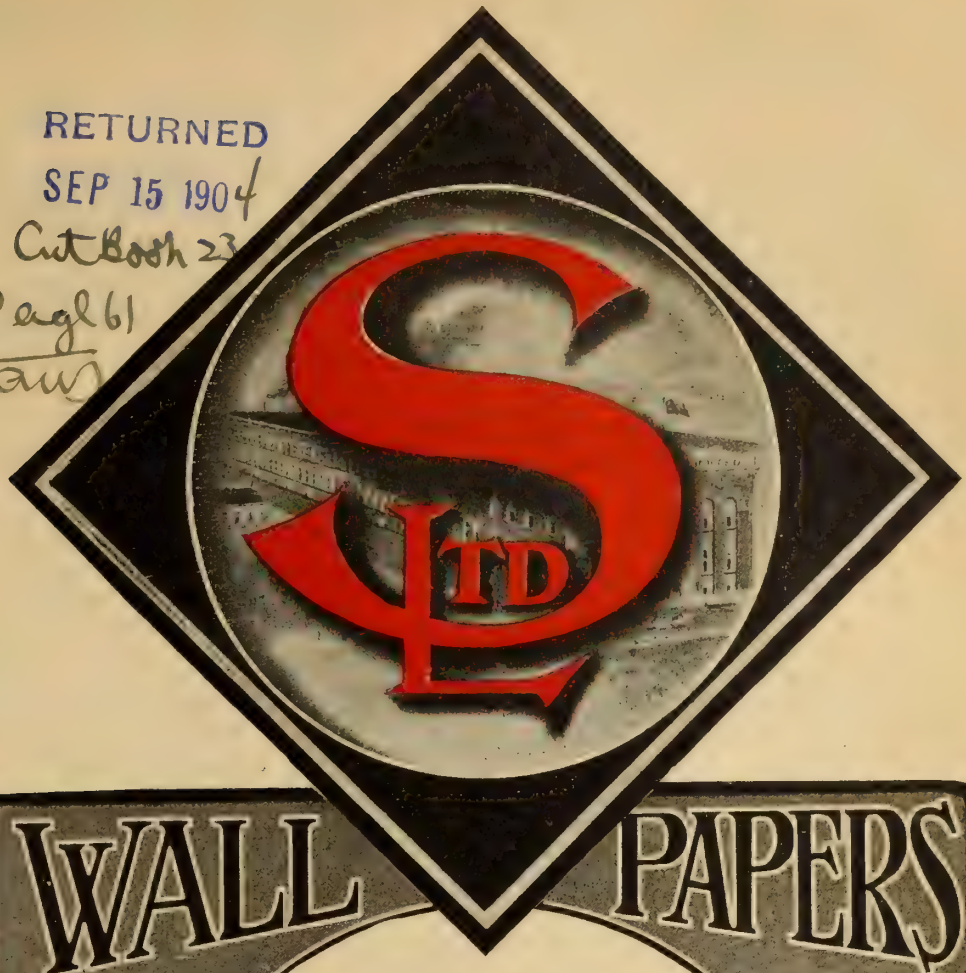
No outward expression of a business is of more vital consequence than the mail that goes out every day; what is



Panel Treatment—Shown by Stauntons Limited.

said and the way it is said. The spirit of your business is sure to show in your correspondence.

RETURNED
SEP 15 1904
Cut Bosh 23
Page 61
aw



WALL PAPERS

OUR TRAVELERS

will be on the road before
the end of June with the

1904-5 Samples

Our personal opinion is that we have surpassed any former offering—you call that prejudice perhaps—but you'll be just as enthusiastic as we are when you see the new "STAUNTON" line.

THERE'S NOT A WEAK SPOT IN THE COLLECTION.

Strength in every design. Beauty in every color scheme. A style and attractiveness peculiar to our products. No end to variety and a good profit for you in every roll.

THE ONE LINE

that every dealer must see to see

THE BEST

STAUNTONS LIMITED

TORONTO

944 YONGE ST. CANADA



RETURNED
SEP 15 1904

ALEX. McARTHUR & CO., Limited, 82 McGill St., Montreal

YOU CAN DEPEND ON OUR

Ready Roofing, Sheathing and Black  Diamond Tarred Felts.

These and our

Building Papers, Fibre and Manilla Wrappings, etc.,

are made at our own Mills and Factory

FELT FACTORY

Harbour and Logan Sts, MONTREAL

PAPER MILLS

JOLLIETTE, QUE.

CURRENT MARKET QUOTATIONS.

June 24, 1904.

These prices are for such qualities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

TINPLATES.

Charcoal Plates—Bright. Per box.
M.L.S., equal to Bradley—
I.C., usual sizes..... \$6 50
I X "..... 8 00
I X X "..... 9 50

Famous, equal to Bradley—
I.C..... 6 75
I X "..... 8 25
I X X "..... 9 75

Raven and Vulture Grades—
I.C., usual sizes..... 4 25
I X "..... 5 00
I X X "..... 5 75
I X X X "..... 6 50

"Dominion Crown Best"—Double
Coated, Tissue. Per box.

I.C..... 5 50
I X "..... 6 50
X X "..... 7 50
Allaway's Best—Standard Quality.

I.C..... 4 50
I X "..... 5 50
I X X "..... 6 50

Coke Plates—Bright.
Bessemer Steel—
I.C., usual size, 14x20..... 3 35
I.C., special sizes, base..... 3 60
20x28..... 7 10

Charcoal Plates—Terne
Dean or J. G. Grade—
I.C., 20x28, 112 sheets..... 7 50
I X, "Terne Tin..... 10 50

Charcoal Tin Roller Plates.
Cockley Grade—
X X, 14x56, 50 sheet bxs. }
" 14x60, " }
" 14x65, " }..... 7 00

Tinned Sheets.
72x30 up to 24 gauge..... 7 25
" 26..... 7 75

IRON AND STEEL.

Common bar, per 100 lb..... 1 80
Refined "..... 2 20
Horseshoe Iron "..... 2 25
Hoop steel, 1½ to 3-in. base..... 2 75
Sleigh shoe steel, "..... 2 10
Tire steel "..... 2 30
T. Firth & Co.'s tool steel, per lb 0 12½ 0 13
B. K. Morton & Co.
" Alpha " tool steel..... 0 70
" M " Self-Hardening..... 0 60
" I " Standard..... 0 14
Jessop's high speed steel..... 0 60
" standard tool steel..... 0 14
" crucible steel..... 0 14
" Chas. Leonard's tool..... 0 08 0 09

Crucible Steel Co.
" Black Diamond..... 0 10 0 11
" Silver steel..... 0 13
" Special..... 0 17
" Rex high speed steel..... 0 65 0 75
" Self-Hardening..... 0 45 0 50
Sanderson's Crucible Tool..... 0 03 0 09
" Superior..... 0 12 0 13
" Extra Anil..... 0 15
" Self-Hardening..... 0 45 0 50
" Rex high speed..... 0 65 0 75
Jonas & Colver's tool steel..... 0 10 0 20
" Air Hardening..... 0 70
Drill steel, per lb..... 0 08 0 10

BARBIT METAL.

"Tandem," A..... per lb. 0 27
" B..... 0 21
" C..... 0 11½
Frictionless Metal..... 0 23

Syracuse Smelting Works:
Aluminum, genuine..... 0 45
Government, "..... 0 44
Tough, "..... 0 40
Hard, "..... 0 40
Dynamo..... 0 30
Special..... 0 25
Harmony..... 0 22
Car Box..... 0 20
Extra..... 0 15

The Canada Metal Co.:

Imperial, genuine..... 0 40
Metallic..... 0 30
Hercules..... 0 20
Star..... 0 15
No. 1..... 0 12
No. 2..... 0 10
No. 3..... 0 06
No. 4..... 0 05

Geo. Langwell & Son.

No. 1..... 0 08
No. 2..... 0 07
No. 3..... 0 05½
Extra..... 0 09½

BLACK SHEETS.

10 and 16 gauge..... Montreal 2 25 Toronto 2 50
18 gauge..... 2 30 2 50
20 "..... 2 30 2 50
22 to 24 gauge..... 2 35 2 70
26 "..... 2 40 2 80
28 "..... 2 40 2 90

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary..... 2 60
All bright..... 3 50
Galvanized Canada Plates—

Ordinary. Dom. Crown.
18x24x52..... 4 25 4 35
" 60..... 4 50 4 60
20x28x80..... 8 50 8 70
" 94..... 9 00 9 20

GALVANIZED SHEETS.

Fleur-de-Lis. Gordon Crown. Comet Bell. Head
16 gauge..... 3 65 3 75 3 75
18 to 24 gauge..... 3 75 3 75 3 75
26 "..... 4 00 4 00 3 90
28 "..... 4 25 4 25 4 05
American brands, \$4.00 for 28 gauge.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 1-16 "..... 5 60
" 1-16 "..... 3 85
" 1-16 "..... 3 70
" 1-16 "..... 3 55
" 1-16 "..... 3 45
" 1-16 "..... 3 35
" 1-16 "..... 3 25
Halter, kennel and post chains, 40 to 40 and
5 per cent.
Cow ties..... 40 p.c.
Tie out chains..... 65 p.c.
Stall fixtures..... 35 p.c.
Trace chain..... 45 p.c.
Jack chain, iron, single and double, discount
35 p.c.
Jack chain, brass, single and double, dis-
count 40 p.c.

COPPER.

Ingot. Per 100 lb.
Casting, car lots..... 13 75
Bars.
Cut lengths, round, ½ to 1 in. 21 00 23 00
" round and square,
1 to 2 inches..... 21 00 23 00

Sheet.
Plain, 16 oz., 14x48 and 14x60..... 20 00
Plain, 14 oz.,..... 21 00
Tinned copper sheet..... 24 00
Finished..... 32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 "..... 0 21
" 50-lb. and above "..... 0 20

BOILER AND T.K. PITTS.
Plain tinned, per lb..... 0 28
Spun, per lb..... 0 32

BRASS.
Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4..... 0 23
Tubing, base, per lb..... 0 23½

ZINC SPelter.
Foreign, per 100 lb..... 6 00 6 25
Domestic..... 6 50 7 00

ZINC SHEET.
5-cwt. casks..... 6 15 6 50
Part casks..... 6 50 7 00

LEAD.
Imported Pig, per 100 lb..... 3 20 3 30
Bar, per lb..... 0 05
Sheets, 2½ lb. sq. ft., by roll..... 0 06½
Sheets, 3 to 6 lb. "..... 0 06

NOTE.—Cut sheets 1c. per lb., extra. Pipe,
by the roll, usual weights per yard, lists at 7c.
per lb. and 35 p.c. list. f.o.b. Toronto.
NOTE.—Cut lengths, net price, waste pipe
8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's..... per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00
per 100 lb.; buck, seal and ball, \$7.50. Dis-
count 17½ p.c. Prices are f.o.b. Toronto,
Hamilton, Montreal, St. John and Halifax.
Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.

Zinc..... 6 00
Copper, discount 20 per cent. off revised list.

BATHS.

Standard Enameled.
5½-ft. rolled rim, 1st quality..... 21 60
" 2nd..... 17 85

CLOSETS.

Net.
Fittings..... 1 00
Plain Simplex Syphon Jet "..... 9 00
Emb..... 9 50
Fittings..... 1 25
Low Down Elgin or Eutonic, plain..... 6 00
Low " emb..... 6 50
Connection..... 1 25
Plain Richelieu..... 4 25
Emb..... 4 50
Connections..... 1 25
Basins, P.O., 14-in..... 2 63
Basins, oval, 17 x 14-in..... 1 50
Basins, " 19 x 15-in..... 2 00

IRON PIPE.

Black pipe— Per 100 feet.
1-inch..... 1 95
" 1½ "..... 1 95 2 05
" 2 "..... 2 15 2 25
" 2½ "..... 2 25 2 35
" 3 "..... 2 95 3 05
" 3½ "..... 4 25 4 35
" 4 "..... 5 95 6 10
" 4½ "..... 7 15 7 40
" 5 "..... 10 00
" 6 "..... 18 00
" 8 "..... 21 00
" 10 "..... 26 75
" 12 "..... 32 00
" 14 "..... 38 00
" 16 "..... 40 00
" 18 "..... 53 00

Galvanized pipe—
1-inch..... 2 88
" 1½ "..... 3 11
" 2 "..... 3 42
" 2½ "..... 4 40
" 3 "..... 6 35
" 3½ "..... 8 80
" 4 "..... 10 75
" 4½ "..... 14 80

Malleable Fittings—Discount 20 p.c.
Cast Iron Fittings—
Standard, 57½ per cent.; unions, 55 per cent.;
on nipples, headers and flanged unions, 60
per cent.

PLUMBERS' BRASS GOODS.

Standard Compression work, dia. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra dis-
count 10 per cent.
Lever handle Stops and Waste, discount 60
per cent. With, in lots of 2 dozen and over
an extra discount of 10 per cent.
J.M.T. Globe, Angle and Check Valves, dis-
count 55 per cent.

Standard Globe, Angle and Check Valves,
discount 60 per cent.
Kerr's special standard globes and angles,
discount 60 per cent.

Kerr's Jenkin disc, copper-alloy disc and
heavy standard valves, discount 60 per cent.
Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator
valves, discount 70 per cent.

Kerr's Jenkin disc, copper-alloy disc radi-
ator valves, discount 70 per cent.

Kerr's quick-opening hot water radiator
valves, discount 70 and 10 per cent.

Weber's (Kerr) patent straightway gate
valves, brass, discount 55 per cent.

Weber's (Kerr) patent straightway gate
valves, L.B.B.M., discount 70 per cent.

J.M.T. Radiator Valves discount 55 per cent.
Standard Radiator Valves, discount 60 per
cent.

Patent Quick-Opening Valves, discount 65
per cent.

No. 1 compression bath cock..... net 1 75

No. 4 "..... " 1 90

No. 7 Fuller's..... " 2 10

No. 43, "..... " 2 25

Patent Compression Cushion, basin
cock, hot and cold..... per doz. 15 00

Patent Compression Cushion, bath
cock, No. 2208..... " 2 25

Square head brass cocks, discount 55 per cent.
iron " 50 to 60

Thompson Smoke-test Machine \$25.00

RANGE BOILERS.

Dominion, 30 gallon..... net 4 75

" 35 "..... " 5 75

" 40 "..... " 6 75

Copper, 30 gallon..... " 22 00

" 35 "..... " 24 00

" 40 "..... " 28 00

Discount off copper boilers 15 per cent.

SOID PIPE AND FITTINGS.

Light soil pipe, discount, 50 per cent.

" fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60
per cent.

7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.

Bar, half-and-half, guaranteed..... Per lb. 0 19

Bar, half-and-half, commercial..... 0 18

Refined..... 0 18

WRENCHES.

Acme, discount 35 to 37½ per cent.

Agricultural, discount 60 per cent.

Coe's Genuine, discount 20 to 25 per cent.

Towers' Engineer..... each 2 00 7 00

" S..... per doz. 5 80 6 00

G. & K.'s Pipe..... each 3 40

Burrell's Pipe..... each 3 00

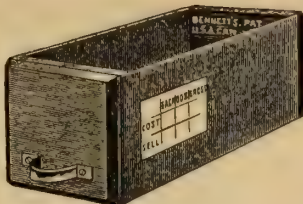
Pocket..... per doz. 0 25 2 90

...THE...

Bennett Manufacturing Co.

Bennett's Patent Shelf Box and Cabinets
for Hardware, Grocery, Seed and
Drug Trades, etc.

Owing to
the steady
and rapid
growth of
our business
new quar-
ters were
needed.



Address all communications to our New Factory:

Pickering, Ontario

THIS REPRESENTS OUR
NEW PATTERN.

Mrs. Potts' SAD IRON

GREAT SELLER.



THE H. R. IVES CO., Limited, MONTREAL.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt. Less than this quantity 1c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12 1/2
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87 1/2
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorator's Pure	5 00
Monarch	4 75
Decorator's Pure	4 25
Essex Genuine	5 00
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25
Genuine, 100 lb. kegs	4 75
No. 1, 560 lb. casks, per cwt	4 00
No. 1, 100 lb. kegs, per cwt	4 25

WHITE ZINC.

Extra Red Seal	0 06
French V. M.	0 06
Lehigh	0 06

DRY WHITE LEAD.

Pure, casks	4 50
Pure, kegs	4 75
No. 1, casks	4 25
No. 1, kegs	4 50

PREPARED PAINTS.

In 1/2, 1 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 40
Toronto Lead & Color Co.'s pure	1 25
Sanderson Pearce's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
Thistle	1 00
edge, best white cloth wads, in	0 55
Island City House Paint	1 25
Floor	1 25
Sterling House Paint	1 20
Floor	1 10
National	1 05

PATTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose	1 35
25-lb. tins	1 80
12 1/2 lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
rubbing	2 35	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
orange	2 50	2 40
Turpentine, brown japan	1 10	1 20
black japan	1 10	1 20
No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granite floor finish, per gal	2 75	
Maple Leaf coach enamels; size 1, \$1.20; size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish, assorted case, from to 1 gal., \$2.50.		

GLUE.

Common	0 08	0 08 1/2
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatin	0 18	0 20
Strip	0 19	0 20
Coopers	0 19	0 20
Hutner	0 12	0 16
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 40 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 5 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 10 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

per lb.

Best thick brown or grey felt wads, in 1/2-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8	0 90
5 and 6	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8	1 65
5 and 6	1 90

ADZES.

Discount 20 per cent.

ANVILS.

Wright's, 80-lb. and over	0 10 1/2
Hay Budden, 80-lb. and over	0 09 1/2
Brook's, 80-lb. and over	0 11 1/2

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

AXES.

Chopping Axes	
Single bit, per doz	7 00
Double bit, " "	10 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters' Axes	5 50
Boys' Axes	6 25
Splitting Axes	7 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys' handled	5 75
hunters	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE.

Ordinary, per gross	6 00
Best quality	10 00

BELLS.

Hand.

Brass, 60 per cent.	
Nickel, 55 per cent.	
Cow.	
American make, discount 63 1/2 per cent.	
Canadian, discount 45 and 50 per cent.	

Door.

Gongs, Sargent's	5 50
"Peterboro", discount 50 and 10 per cent. off new list.	8 00
American, each	1 25
House.	0 35
American, per lb.	0 35

BELLOWS.

Hand, per doz	3 35
Moulders, per doz	7 50
Blacksmiths', discount 40 per cent.	10 00

BELTING.

Extra, 60 per cent.

Standard, 60 and 10 per cent.

No. 1, not wider than 6 in., 60, 10 and 10 per cent.

Agricultural, not wider than 4 in., 75 per cent.

BITS.

Auger.

Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.

Gilmour's, 47 1/2 per cent.

Expansive.

Clark's, 40 per cent.

Gimlet.

Clark's, per doz

Diamond, Shell, per doz

Nail and Spike, per gross

BLIND AND RED STAPLES.

All sizes, per lb.

BOLTS AND NUTS

Carriage Bolts, common (\$1 list)

" " 3-16 and 1/2

" " 5-16 and 3/4

" " 7-16 and up

" " full sq. (\$2.40 list)

" " Norway Iron (\$3 list)

Machine Bolts, all sizes, 1/2 and less

Machine Bolts, 7-16 and up

Plough Bolts

Blank Bolts

Bolt Ends

Sleigh Shoe Bolts

Coach Screws, cone point

Nuts, square, all sizes, 4c. per lb. off.

Nuts, hexagon, all sizes, 4c. per lb. off.

Stove Rods per lb., 5 1/2 to 6c.

BOOT CALKS.

Small and medium, ball

Small heel

BRIGHT WIRE GOODS.

Discount 62 1/2 per cent.

BUTCHERS' CLEAVERS.

German	per doz.	6 00	9 00
American	"	12 00	18 00

BUTCHER KNIVES.

Bailey's	per doz.	0 60	6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85	
Ready roofing, 2-ply, not under 45 lb.		
per roll	0 90	
Ready roofing, 3-ply, not under 65 lb.		
per roll	1 15	
Carpet Felt	per ton	45 00
Heavy Straw Sheathing	per ton	35 00
Dry Sheathing	per roll, 400 sq. ft.	0 40
Tar	"	400 "
Dry Fibre	"	400 "
Tarred Fibre	"	400 "
O. K. & I. X. L.	"	400 "
Resin-sized	"	400 "
Oiled Sheathing	"	600 "
Oiled	"	400 "
Roof Coating, in barrels	per gal.	0 17
Roof	small packages	0 25
Refined Tar	per barrel	5 00
Coal Tar	"	4 00
Coal Tar, less than barrels	per gal.	0 15
Roofing Pitch	per 100 lb.	1 10

BULL RINGS.

Copper, \$2.00 for 2 1/2-inch, and \$1.9 1/2 for 2-inch.

BUTTS.

Wrought Brass, net revised list.

Cast Iron.

Loose Pin, discount 60 per cent.

Wrought Steel.

Fast Joint, discount 65, 10 and 2 1/2 per cent.

Loose Pin, discount 65, 10 and 2 1/2 per cent.

Berlin Bronzed, discount 70, 70 and 5 per cent.

Gen. B. ronzed, per pair 0 40 0 65

CARPET STRETCHERS.

American	per doz.	1 00	1 50
Bullard's	"		6 50

CASTORS.

Bed, new list, discount 55 to 57 1/2 per cent.

Plate, discount 52 1/2 to 57 1/2 per cent.

CATTLE LEADERS.

Nos. 32 and 33	per gross	7 50	8 50
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CHALK.

Carpenters' Colored, per gross	0 45	0 75
White lump	per cwt.	0 60
Red	"	0 05
Crayon	per gross	0 14

CHISELS.

Socket, Framing and Firmer.

Broad's, discount 60 and 10 per cent.

Warnock's, discount 50 and 10 per cent.

P. S. & W. Extra, discount 60 and 10 per cent.

FOODS—STOCK.

Colonial Stock Foods, 50c. packages,

" " " 25c. pkgs., " "

" " " 10c. " " "

" " " 25-lb. pail, each

Poultry Foods, 25c. packages

Cough Powders, per doz.

Worm

International 1 Stock Foods, \$1 packages,

per doz.

International Stock Foods, per pail

" " " per bbl

" " " \$1pkgs. per doz.

" "

EASY TO PUT ON HARD TO WEAR OUT

Aptly describes two of the many advantages possessed by Paterson's Wire
Edged Ready Roofing, the only popular substitute for Shingles.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.

Plain or Corrugated.

2-inch	per 100 feet	3 00
3 "	" "	4 00
4 "	" "	5 25
5 "	" "	6 75
6 "	" "	9 00

CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	per pair	0 17½
S. & D., " 5	" "	0 22½
S. & D., " 6	" "	0 15
Boynton pattern	" "	0 20

DOOR SPRINGS.

Torrey's Rod	per doz.	1 75
S. & D., " 9 to 11 in.	" "	0 95
English	" "	2 00

DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Miller's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.

Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAVETROUGHS.

10-inch per 100 ft. | 10 00 |

ELBOWS (stovepipe.)

5 and 6-inch, common per doz. | 1 20 |

7-inch " " | 1 35 |

Polished, 15c. per dozen extra.

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASTS.

Great Western 70 and 10 per cent. |

Arcade " " |

Kearney & Foot " " |

Disson's " " |

American " " |

J. Barton Smith " " |

McClellan " " |

Eagle " " |

Nicholson, 60 and 10 to 60, 10 and 5

Royal " " |

Globe 70 to 75 |

Black Diamond, 60 and 10 to 60, 10 and 5 per cent.

Jowitt's, English list, 25 to 27½ per cent.

Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50

GLASS.

Window. Box Price.

Size United Inches.	Per 50 ft.	Star Per 100 ft.	D. Diamond Per 100 ft.
Under 26	3 80	5 06	
26 to 40	4 00	5 44	
41 to 50	4 50	6 56	
51 to 60	4 75	7 50	
61 to 70	5 00	8 62	
71 to 80	5 30	9 38	
81 to 85		10 75	
86 to 90		12 30	
91 to 95		15 00	
96 to 100		18 00	

Discount 15 per cent.

GAUGES.

Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33 each | 1 65 |

GILLET'S POWDERED LYE.

1-case, \$3.60; 3-case, \$3.50; 5-case and over, \$3.40.

HALTERS.

Rope, ½-inch per gross | 12 00 |

Rope, ¾-inch " " | 9 00 |

Rope, 1 to 1½-inch " " | 14 00 |

Leather, 1-inch per doz. | 4 00 |

Leather, 1½-inch " " | 5 20 |

Web " " | 2 45 |

HATCHETS.

Shingle, Red Ridge 1, per doz. 4 40 |

2, " 4 85 |

Barrel, Underhill 5 00 |

HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

Tack.

Magnetic per doz. | 1 10 |

Sledge " " | 0 08½ |

Canadian per lb. | 0 07½ |

Ball Pean.

English and Canadian, per lb. 0 22 |

HANDLES.

Axe, 2nd growth, per doz. net 3 00 |

tore door per doz. | 1 00 |

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

American per doz. | 1 00 |

Plane per gross | 3 15 |

American per gross | 3 15 |

Canadian, discount 40 per cent.

HANGERS.

Steel barn door 8 00 |

Stearns, 4-inch 4 50 |

5-inch 6 00 |

Zenith 9 00 |

Lare's covered—

No. 11, 5-foot run 8 40 |

No. 11½, 10-foot run 10 80 |

No. 12, 10-foot run 12 60 |

No. 14, 15-foot run 21 00 |

Steel, covered, 1 x 3-16 in (100 ft) 4 00 |

" track, 1 x 3-16 in (100 ft) 3 75 |

" 1½ x 3-16 in (100 ft) 4 75 |

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½ |

" " 5-in., " 0 06½ |

" " 6-in., " 0 06½ |

" " 8-in., " 0 05½ |

" " 10-in., " 0 05½ |

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in. per 100 lb. | 4 50 |

12 in. up " " | 3 25 |

Spring, No. 20, per gro. pairs 10 50 |

HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter per doz. | 4 00 |

HOLLOW WARE.

Tinned cast, 35 per cent.

HOOES.

Cast Iron.

Bird cage per doz. | 9 50 |

1 10

Clothes line, No. 61 0 00 |

Harness 0 60 |

Hat and coat per gro. | 1 10 |

Chandelier per doz. | 0 50 |

Wrought Iron.

Wrought hooks and staples Canadian discount 60 per cent. |

Wire.

Hat and coat, discount 60 per cent.

Belt per 1,000 | 0 60 |

Screw, bright, discount 60 per cent.

HORSE NAILS.

"C" brand, 40, 10 and 7½ per cent. off list

"M" brand, 55, per cent.

Countersunk, 57½ per cent.

"Monarch," 50 and 7½ per cent.

"Peerless," 50 per cent. dis.

HORSESHOES.

Iron Shoes.

Light, medium and heavy 3 65 |

Snow shoes 3 90 |

Steel Shoes.

XL, sizes 1 to 5 5 35 |

Light, No. 2 and larger 3 80 |

No. 1 and smaller 4 05 |

Featherweight, all sizes 0 to 4 5 35 |

Toeweight, all sizes 1 to 4 6 60 |

JAPANNED WARE.

Discount 50 per cent.

ICE PICKS.

Star per doz. | 00 |

KETTLES.

Brass spun 7½ per cent. discount off new list.

Copper per lb. | 0 30 |

American, 60 and 10 to 65 and 5 per cent.

KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,

American per gross | 0 60 |

KNOBS.

Door, japanned and N.P., per

doz. 1 50 |

Bronze, Berlin per doz. | 2 75 |

Bronze, Genuine 6 00 |

Shutter, porcelain, F. & L.

screw per gross | 1 30 |

White door knobs per doz. | 2 00 |

HAY KNIVES.

Net prices.

LAMP WICKS.

Discount, 60 per cent.

LANTERNS.

Cold Blast per doz. | 7 00 |

No. 3, "Wright's" " " | 8 50 |

Ordinary, with O burner " " | 4 00 |

Dashboard, cold blast " " | 9 00 |

No. 0 " " | 5 75 |

Japaning, 50c. per doz. extra.

LEMON SQUEEZERS.

Porcelain lined per doz. | 2 20 |

Galvanized " " | 1 87 |

King, wood " " | 2 75 |

King, glass " " | 4 00 |

All glass " " | 0 50 |

LINES.

Fish per gross | 1 05 |

Chalk " " | 1 90 |

LAWN MOWERS.

Woodyatt, 10½-in. wheel, 14-in. cut .. 8 50 |

Star, 9-in. " 7 00 |

Daisy, 8-in. " (net) 2 87½ |

Philadelphia, 7½-in. " 7 00 |

Ontario, 7½-in. " 15 80 |

King Edward, 12-in. " 9 50 |

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:

10½-in. high wheel 7 50 |

9-in. " 5 50 |

8-in. " 4 90 |

Discount 50 per cent.

LOCKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwin per doz. | |

Cabinet.

Eagle, discount 30 per cent.

Padlocks.

English and Am. per doz. | 0 50 |

Eagle, discount 20 to 25 per cent.

MACHINE SCREWS.

Iron and Brass.

Flat head, discount 25 per cent.

Round head, discount 20 per cent.

MALLETS.

Tinsmith

The New U.M.C. 33 Primers

give an added ballistic value to the powder and shot charges in all U. M. C. smokeless powder shells.

THE NO. 3 U. M. C. PRIMERS

were the first and best primers for smokeless powder ever made here or abroad—until the advent of the new U.M.C. 33 primers, which were substituted for them some time ago.

The U.M.C. Southern Squad used shells primed with the new 33 primers.

The Union Metallic Cartridge Co.

Agency, 313 Broadway, New York, N.Y.

Factory, BRIDGEPORT, CONN.

PLANE IRONS.		SAP SPOUTS.		STAPLES.		ENAMELLED WARE.	
English	per doz. 2 00 5 00	Bronzed iron with hooks	per 1,000 7 50	Galvanized	3 00	White, Princess, Turquoise, Blue and White	discount 50 per cent.
PLIERS AND NIPPERS.		"Eureka" tinned steel, hooks	8 00	Plain	2 80	Diamond, Famous, Premier, discount 50 and	10 per cent.
Button's genuine, per doz. pairs, discount		SAWS.		Coopers, discount 45 per cent.		Granite or Pearl, Imperial, Crescent, discount	50, 10 and 10 per cent.
37½ to 40 per cent.		Hand, Disston's, discount 12½ per cent		Poultry netting staples, discount 40 per cent.		Premier steel ware, 40 per cent.	
Button's imitation, per doz. 5 00 9 00		S. & D., discount 40 per cent.		STOCKS AND DIEN.		"Star" decorated steel and decorated white,	25 per cent.
German	0 60 60	Crosscut, Disston's, per foot 0 35 0 55		STONE.		WIRE.	
PRESSED SPIKES.		S. & D., discount 35 per cent. on Nos. 2 and 3.		Washita	per lb. 0 28 0 60	Smooth Steel Wire.	
Discount 20 per cent.		Hack, complete, each 0 75 2 75		Hindustan	0 06 0 07	No. 0-9 gauge	\$2 50
PULLEYS.		Hack, frame only, each 0 50 1 25		" slip	0 09 0 09	10 "	6c. extra.
Hothouse	per doz. 0 55 1 00	SASH WEIGHTS.		Labrador	0 13	11 "	12c. "
Axle	0 22 0 33	Sectional,	per 100 lb. 2 00 2 25	" Axe	0 15	12 "	20c. "
Screw	0 27 1 00	Solid	1 50 1 75	Turkey	0 30	13 "	30c. "
Awning	0 35 2 50	SASH CORD.		Arkansas	1 50	14 "	40c. "
PUMPS.		Per lb.	0 28 0 30	Water-of-Ayr	0 10	15 "	55c. "
Canadian cistern	1 80 3 60	SAW SETS.		Scythe	per gross 3 50 5 00	16 "	70c. "
Canadian distern spout	1 40 2 10	Lincoln and Whiting	4 75	Grind, 2-in., 40 to 200 lb., per ton	25 00	Add 60c. for coppering and \$2 for tinning.	
PUNCHES.		Hand Sets, Perfect	4 00	" under 40 lb.,	28 00	Extra net per 100 lb.—Oiled wire 10c.,	
Saddler's	per doz. 1 00 1 85	X-Cut Sets,	7 50	" under 2 in. thick,	29 00	spring wire \$1.25, special hay baling wire 30c.,	
Conductor's	3 00 15 00	SCALES.		STOVEPIPES.		best steel wire 75c., bright soft drawn 15c.,	
Finner's, solid,	per set 0 72	Gurney Standard, 40 per cent.		5 and 6 inch, per 100 lengths	7 00	charcoal (extra quality) \$1.25, packed in casks	
" hollow,	per inch 1 00	Gurney Champion, 50 per cent.		7 inch	7 50	or cases 15c., bagging and papering 10c., 50	
RAKES.		Burrow, Stewart & Milne—		ENAMELINE STOVE POLISH.		and 100-lb. bundles 10c., in 25-lb. bundles	
Wood	per doz. net 1 20 up	Imperial Standard, discount 40 per cent.		No. 4, 3 doz. in case, net cash	4 80	15c., in 5 and 10-lb. bundles 25c., in 1-lb.	
RAZORS.		Weight Beams, discount 35 per cent.		No. 6, 3 doz. in case,	8 40	hanks 50c., in 1-lb. hanks 75c., in 1-lb.	
Elliot's	per doz. 4 00 18 00	Champion Scales, discount 50 per cent.		TACKS, BRADS, ETC.		hanks \$1.	
Geo. Butler's & Co.'s	4 00 18 00	Fairbanks standard, discount 35 per cent.		Carpet tacks, blued	80 and 15	Fine Steel Wire, discount 25 per cent.	
Boker's	7 50 11 00	" Dominion, discount 55 per cent.		" tinned	80 and 20	List of extras: In 100-lb. lots: No. 17,	
" King Cutter	12 50 15 00	" Richelieu, discount 55 per cent.		" (in kegs)	40	\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—	
Wade & Butcher's	3 60 10 00	Warren's new Standard, discount 40 per cent.		Cut tacks, blued, in dozens only	80	No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No.	
Thiele & Quack's	7 00 12 00	" Champion, discount 50 per cent.		" weights	60	24, \$8—No. 25, \$9—No. 26, \$9.50—No. 27,	
Carbo Magnetic	15 00	" Weightbeams, discount 35 per cent.		Swedes cut tacks, blued and tinned—		\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—	
Griffon Barber's Favorite	10 75	SCREW DRIVERS.		In bulk	80 and 10	No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,	
Griffon No. 65	13 00	Sargent's	per doz. 0 65 1 00	In dozen	75	\$17. Extras net—tinned wire, Nos. 17-25,	
Griffon Safety Razors	13 50	SCREEN DOORS.		Swedes, upholsters', bulk	85, 12½ and 12½	\$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,	
Griffon Strapping Machines	13 50	Common doors, 2 or 3 panel, walnut		" brush, blued and tinned		5c.—oiling 10c.—in 25-lb. bundles, 15c.—in 5	
Lewis Bros. "Klean Kutter"	8 50 10 50	stained, 4-in. style	per doz. 6 50	bulk	70	and 10-lb. bundles 25c.—in 1-lb. hanks 25c.	
REGISTERS.		Common doors, 2 or 3 panel, yellow and		Swedes, gimp, blued, tinned and		—in 1-lb. hanks, 38c.—in 1-lb. hanks, 50c.—	
Discount 40 per cent.		green stained, 4-in. style	per doz. 6 75	Japanned	75 and 12½	packed in casks or cases, 15c.—bagging or	
RIVETS AND BURRS.		Common doors, 2 or 3 panel, in natural		Zinc tacks	35	papering, 10c.	
Iron Rivets, black and tinned, discount 60 and		colors, oil finish	per doz. 8 75	Leather carpet tacks	55	Brass wire, discount 60 per cent. off the list.	
10 per cent.		3-in. style 20c. per dozen less.		Copper tacks	50	Copper wire, discount 60 per cent. net cash	
Iron Burrs, discount 55 per cent.		SCREWS.		Copper nails	52½	30 days, f.o.b. factory.	
Extras on Iron Rivets in 1-lb. cartons, 1c.		Wood, F. H., bright and steel, discount 87½		Trunk nails, black	65 and 5	Galvanized wire, per 100 lb.—Nos. 4 and 5,	
per lb.		per cent.		Trunk nails, blued	65 and 5	\$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.15	
Extras on Iron Rivets in 1-lb. cartons, 1c.		Wood, R. H., bright, dis. 82½ per cent.		Clout nails, blued	65 and 5	No. 9, \$2.55—No. 10, \$3.20 to \$3.20	
per lb.		" F. H., brass, dis. 80 per cent.		Chair nails	35	No. 11, \$3.25 to \$3.25—No. 12, \$2.65—	
Copper Rivets, with usual proportion burrs, 45		" R. H., "dis. 75 per cent.		Patent brads	40	No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.	
per cent. discount. Cartons, 1c. per lb.		" F. H., bronze, dis. 75 per cent.		Fine finishing	40	15, \$4.30—No. 16, \$4.30. Base sizes, Nos.	
extra, net.		" R. H., "dis. 70 per cent.		Lining tacks, in papers	10	6 to 9, \$2.27 f.o.b. Cleveland. In carlots	
Copper Burrs only, discount 30 and 10 per cent.		Drive Screws, dis. 87½ per cent.		" in bulk	15	12c. less.	
Extras on Tinned or Coppered Rivets, 1-lb.		Bench, wood	per doz. 3 25 4 00	Saddle nails, in papers	75	Clothes Line Wire, regular 7 strand, No. 17,	
cartons, 1c. per lb.		" iron	4 25 5 00	" in bulk	15	\$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow	
RIVET SETS.		Set, case hardened, dis. 60 per cent.		Double pointed tacks, papers	50 and 10	6 strand, No. 17, \$4.30; No. 18, \$2.70; No.	
Canadian, discount 35 to 37½ per cent.		Square Cap, dis. 50 and 5 per cent.		bulk	45	19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,	
ROPE, ETC.		Hexagon Cap, dis. 45 per cent.		Clinch and duck rivets	40	Toronto, Montreal.	
isal	0 10½	SCYTHES.		TAPE LINES.		WIRE FENCING.	
Pure Manila	0 13½	Per doz. net	6 00 9 00	English, ass skin	per doz. 2 75 5 00	Galvanized barb	2 75
"British" Manila	0 12	SCYTHE SNATHS.		English, Patent Leather	5 50 9 75	Galvanized, plain twist	2 80
Cotton, 3-16 inch and larger	0 20½	Canadian, discount 40 per cent.		Chesterman's	each 0 90 2 85	Galvanized barb, f.o.b. Cleveland, \$2 55½ in	
5-32 inch	0 22	SHEARS.		steel	each 0 80 8 00	less than carlots, and \$2 45 in carlots.	
1 inch	0 25	Bailey Cutlery Co., full nickeled, discount		TINNERS' SNIPS.		COILED SPRING WIRE.	
" 1 inch	0 25	and 2½ per cent.		Per doz.	3 00 15 00	High Carbon, No. 9	\$2 70
Russia Deep Sea	0 15	Bailey Cutlery, Japan Handles, discount 67½		THERMOMETERS.		" No. 11	3 30
Jute	0 08	per cent.		Tin case and dairy, discount 75 to 75 and 10		" No. 12	2 95
Lath Yarn, single	0 10½	Seymour's, discount 50 and 10 per cent.		TRAPS (steel.)		WIRE CLOTH.	
" double	0 11	SHOVELS AND SPADES.		Game, Newhouse, discount 25 per cent.		Painted Screen, per 100 sq. ft., net	1 50
Sisal bed cord, 48 feet	per doz. 0 65	Canadian, discount 45 per cent.		Game, H. & N. P. S. & W., 65 per cent.		Terms, 2 per cent. off 30 days.	
" 60 feet	0 80	SINKS.		Game, steel, 72½, 75 per cent.		WASHING MACHINES.	
" 72 feet	0 95	Castiron, 16 x 24	0 85	TROWELS.		Round, re-acting, per doz.	56 00
RULES.		" 18 x 30	1 00	Disston's, discount 10 per cent.		Square	50 00
Boxwood, discount 55 per cent.		" 18 x 36	1 40	German	per doz. 4 75 6 00	Eclipse, per doz	48 00
Ivory, discount 37½ to 40 per cent.		SNAPS.		S. & D., discount 35 per cent.		Dowsell	36 00
SAD IRONS.		Harness, German, discount 25 per cent.		TWINES.		New Century, per doz	72 00
Mrs. Potts, No. 55, polished	per set 0 80	Lock, Andrews	4 50 11 50	Bag, Russian	per lb. 0 27	Connor Improved	33 00
No. 50, nickle-plated,	0 90	SOLDERING IRONS.		Wrapping, cotton, 3-ply	0 24	Daisy	48 00
Common, plain	4 50	1, 1½-lb.	per lb. 0 37	4-ply	0 27	WRINGERS.	
plated	5 50	2-lb. or over	0 34	Matress	per lb. 0 33 0 45	Leader	per doz. 30 00 33 00
SAND AND EMERY PAPER.		SQUARES.		Staging	0 27 0 35	Royal Canadian	24 00
B. & A. sand, discount, 40 and 5 per cent		Iron, No. 493	per doz. 2 40 2 55	VISES.		Royal American	24 00
Emery, discount 40 per cent.		" No. 494	3 25 3 40	Wright's	0 13½	Sampson	24 00
Garnet (Hutton's), 5 to 10 per cent. advance		Steel, discount 60 to 60 and 5 per cent.		Pipe Vise; Hinge, No. 1	3 50	Lightning	27 00
on list.		Try and Bevel, discount 50 to 52½ per cent.		" No. 2	5 50	Terms, 4 months, or 3 per cent. 30 days.	
		STAMPED WARE.		Saw Vise	4 50 9 00	WROUGHT IRON WASHERS.	
		Plain, discount 75 and 12½ per cent. off re-		Columbia Hardware Co.		Canadian make, discount 40 per cent.	
		vised list.		Blacksmiths' (discount) 60 per cent.			
		Retinned, discount 75 per cent off revised list.		parallel (discount) 45 per cent.			

Albany Improved Chilled Shot Co.	6	Dominion Radiator Co. outside front cover		Jones & Barclay	17	Paterson Mfg. Co.	60
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American Shearer Mfg. Co.	64	Dundas Axe Works.	6	Kemp Mfg. Co.	17	Pedlar People.	53
American Steel and Wire Co.	5		53	Kerr Engine Co.	8	Penberthy Injector Co.	17
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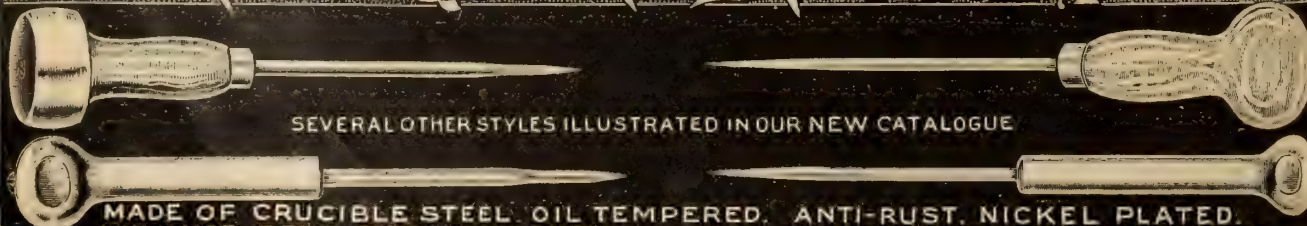
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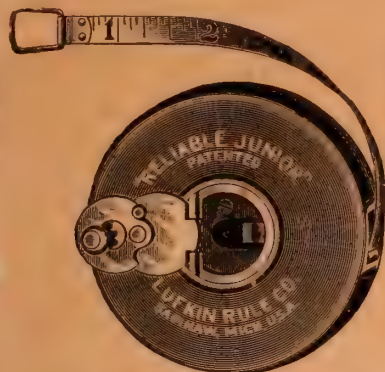
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Twelve PHILADELPHIA TRADE MARK Medals



Awarded
By **JURORS** at
International Expositions
Special Prize

Gold Medal at Atlanta, 1895



GALVANIZED SHEETS.



This trade mark signifies the highest standard of reliability. When in need of Galvanized Sheets for construction work don't be satisfied with substitutes. Insist on the genuine.

B. & S. H. THOMPSON & CO.
LIMITED

53 St. Sulpice Street, MONTREAL.

DOMINION OF CANADA SALES AGENTS:

UNITED STATES STEEL PRODUCTS EXPORT COMPANY
SHEET STEEL AND TIN PLATE DEPARTMENTS.

Numerous Buildings in the Fire District

in the recent Toronto Conflagration were saved from destruction by their own private Fire Hose, purchased from us by owners who were long-headed enough to know the value of such protection. Are you in need? If so, don't delay, but write us at once for prices.

THE GUTTA PERCHA & RUBBER MFG. CO.
OF TORONTO, LIMITED.

Temporary Offices:

15 East Wellington Street, Toronto.
Branches—MONTREAL, WINNIPEG.

SADLER & HAWORTH

FOR THE
**HARDWARE
MERCHANT**

This is meant for you.
Do you handle leather belting? We can show you how to make good profits. Write for our discounts.

Montreal, Toronto.

HARDWARE AND METAL

AND CANADIAN MACHINIST

A Weekly Newspaper devoted to the Hardware, Metal, Machinery,
Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, JULY 2, 1904.

NO. 27

POCKET **H. BOKER & Co's** KNIVES
IMPROVED
TREE BRAND
TRADE MARK
CUTLERY RAZORS SCISSORS

FOR SALE BY LEADING WHOLESALE HARDWARE HOUSES.

"FLEUR DE LIS" GALVANIZED IRON.



First quality, low price, every sheet guaranteed.

JOHN LYSAGHT, Limited, Makers, A. C. LESLIE & CO., MONTREAL
BRISTOL, ENG. Managers Canadian Branch.



Horse Lawn Mowers

These Mowers are the genuine
Coldwell pattern.

In Stock, sizes 25-in., 30-in.,
35-in., 40 in. 4-blades and 6-blades.

Shipped same day that order
is received.

**IF YOU HAVE NOT PRICES,
WRITE US FOR SAME.**

Taylor-Forbes Company,

LIMITED.

Montreal Branch :
9 De Bresoles St.

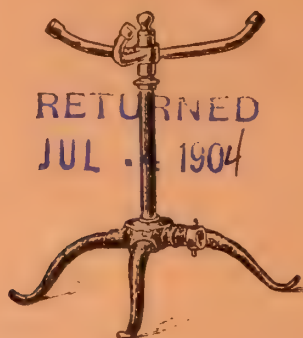
————— GUELPH, CANADA.

THE LARGEST MANUFACTURERS OF HARDWARE IN CANADA.

SUMMER

GET OUR LATEST
CATALOGUE
OF—
SUMMER GOODS and BOAT SUPPLIES

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O
O
D
S



LAWN SPRINKLERS

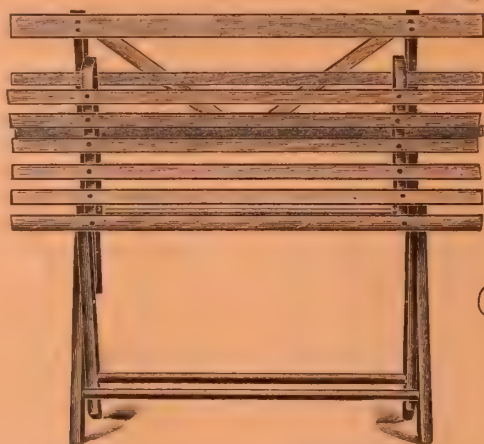


HAMMOCKS.

No. 249, Full Color, 36 x 80, Jacquard weave, w
pillow and concealed spreader at head, wood bars
at each end, wide valance.
ALL SIZES AND COLO

ALL KINDS OF **FLAGS** FOR JACKS, ENSIGNS, STANDARDS, ETC.

HOSE NOZZLES,
HOSE REELS,
LAWN VASES, RETURNED
LAWN GOODS, Etc.
OF ALL KINDS. JUL .4 1904



LAWN SEATS.



Fishing Tackle
of All Kinds.

FISHING REELS.

WRITE FOR TRADE PRICES.

RICE LEWIS & SON
LIMITED
TORONTO.

ALWAYS
READY
FOR USE



Full Hollow
Ground \$2.50 Each
Double Concave for
extra hard beards, \$3.00

Send for free book, "HINTS TO SHAVERS."

The **Carbo Magnetic** RAZOR

No Honing! No Grinding!

Smarting after Shaving. With ordinary careful use will

KEEP AN EDGE FOR YEARS WITHOUT HONING.

Booklet coming—if you will ask for a copy, with trade discount.

FOR SALE BY LEADING JOBBERS.

FIRM OF

J. L. SILBERSTEIN, *Griffon* Cutlery
MAKERS OF

459-461 BROADWAY, NEW YORK.

THE CANADIAN RUBBER CO. of Montreal.

MANUFACTURERS OF

Rubber Belting,
Hose, Packing,
Valves, Gaskets,
ETC., ETC.

We make a specialty of

HORSE SHOE PADS

the best in the market.

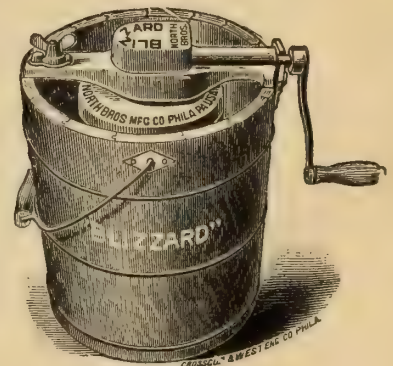
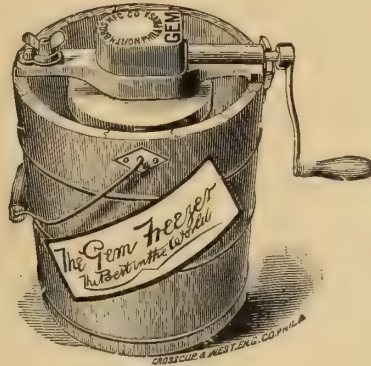
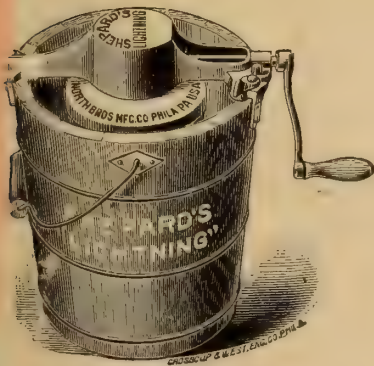
Write for Prices and Circulars.

Head Office : : MONTREAL

BRANCHES—TORONTO, WINNIPEG and VANCOUVER

Lightning, Gem
Blizzard . . .

FREEZERS



ARE

HAVE

EXCEL IN

Well Advertised.
In Demand.
Easily Sold.
Satisfactory in Use.
of Known Reputation.

Cedar Pails with Electric Welded Wire Hoops.
Cans of Heavy Tin with Drawn Steel Bottoms.
AUTOMATIC Twin Scrapers.
"The Ice Cream Freezer Book" tells all about
these and our other Freezers, mailed free.

Easy Running.
Quick Freezing.
Economy.
Convenience.
Practical Results.

North Bros. Mfg. Co., Philadelphia, Pa.,
U. S. A.

THOS. BIRKETT & SON CO., LIMITED

Wholesale Hardware Merchants,
OTTAWA, ONT.



In introducing

The Universal Bread Maker

we do so with confidence,
knowing it will do all that
is said of it.

To mix and knead
bread in **3** minutes may
seem extravagant, but it
is a fact

Here is a

MIXER, KNEADER and RAISER
ALL IN ONE.

The old and disagreeable task of Bread-making is done away with.

We shall be pleased to send booklets for your customers, and give prompt
attention to your sample order.



—FOR SALE BY—

The KENNEDY HARDWARE CO , Limited

49 Colborne St., TORONTO, ONT.

We have now in stock a full line of the following :

**GALVANIZED SHEETS,
BLACK SHEETS,
TINNED SHEETS,
IMITATION RUSSIAN IRON,
IRON PIPE,**

**TINPLATES,
CANADA PLATES,
ZINC SHEETS,
COPPER SHEETS,
BRASS SHEETS,**

IRON and STEEL HOOPS.

METALS, ANTIMONY, COPPER, TIN, LEAD, ZINC,

PROMPT SHIPMENT. PRICES RIGHT.

M. & L. Samuel, Benjamin & Co.

503 Temple Building - TORONTO.

English House—16 Philpot Lane, LONDON, ENGLAND.

Grind Away



VELOX BALL-BEARING GRINDSTONE

Many a merchant grinds away in the same old rut just because an improvement in his system would mean a little "more work." Then why shouldn't it be a good thing to suggest an improvement which would lessen the labor instead of increase it.

Did you ever stop to think how much time and labor was spent in settling accounts?

Too many accounts are as bad in buying as they are in selling; of course if you lessen the number of accounts you lessen the labor.

Our tip is just this: Adopt the cash system in selling, and in buying don't spread yourself, but rather confine your buying to a few reliable houses—the fewer the better. It will lessen not only the work but expenses, worry, and all those little things that make a man's hair grey.

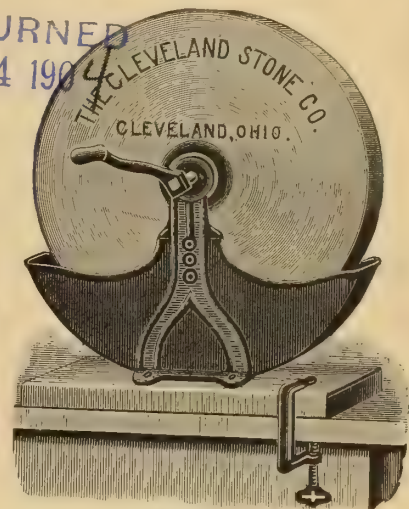
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JUL .4 1904

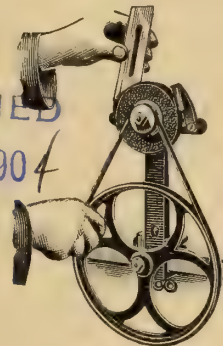
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FAMILY GRINDSTONE



EMERY TOOL GRINDER

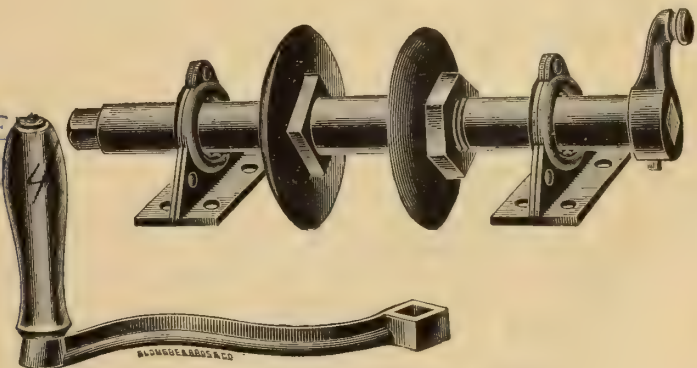
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JUL .4 1904

Grindstones
Emery Wheels
Kitchen Grinders
Mower Knife Grinders
Grindstone Fixtures
Scythe Stones
Oil Stones
Water Stones
Oil Slips
Pocket Hones
Axe Stones
Razor Hones

RETURNED

JUL .4 1904



BALL-BEARING GRINDSTONE FIXTURES

QUOTE
LOW

LEWIS BROS. & CO.

SHIP
QUICK

IMPORTERS AND DISTRIBUTERS.

Address all Correspondence to

TORONTO,
87 York St.OTTAWA,
84 Queen St.VANCOUVER,
141 Water St.

MONTREAL

Cordage
Of every description.
Net Mountings,
Sand Line,
Unoiled Cordage,
Marline,
Extra Long Lengths,
Ratline,
Shingle Yarn.

Core Rope,
Oil Well Cables,
Russian Packing,
Deepest Sea Lines,
Anchor Line,
Good Transmission Rope,
Engine Packing.

Clothes Lines,
Only Best Material Used.

Log Line
Twine.
Dangerous to use Inferior Cordage.

Mail
Orders
Now
To us and
Recieve
Exceptional
Attention.
Low-priced goods are not always
the cheapest.



ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows

AMERICAN ^{FLAT} _{LINK} "THREE CHAIN" TYPE

Also made in "CLOSED RING," "OPEN RING"
and "DOMINION" (or "SHORT") TYPES.

Oneida Community Cow Ties can be had of all the leading jobbers
We invite correspondence where any difficulty is experienced in
obtaining our goods.

Write for New Catalogue.

Address

ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.

STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.

WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for

TROLLEY - TELEGRAPH - TELEPHONE

and

TRANSMISSION LINES

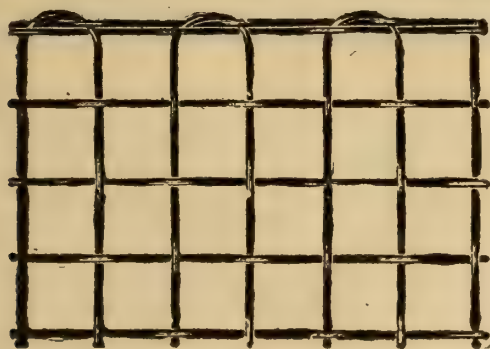
Manufactured by

DOMINION WIRE MFG. CO.

MONTREAL and TORONTO

LIMITED

WIRE CLOTH



*Special Regalvanized Cloth for Apple
and Fruit Drying.*

Stock widths, 24, 30 and 36 in.
Other widths and meshes made to order.

Also 1/2-in. Galvanized Netting.

Stock widths, 24, 30 and 36 in.
Stock lengths, 25 and 50 yards.

Also Wire Cloth and Netting,

FOR ALL PURPOSES.

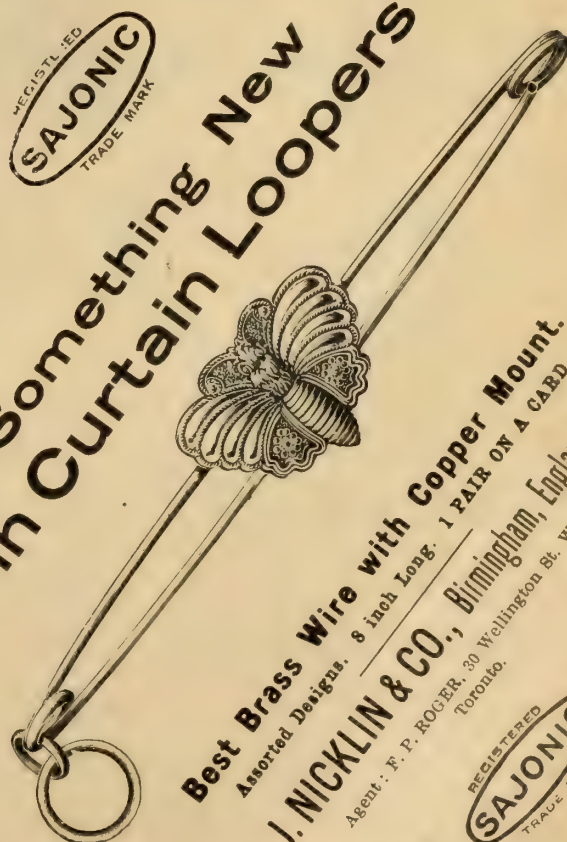
THE B. GREENING WIRE CO.,
LIMITED

Hamilton, Ont.

Montreal, Que.

REGISTERED
SAJONIC
TRADE MARK

*Something New
in Curtain Loopers*



*Best Brass Wire with Copper Mount.
Assorted Designs. 8 inch Long. 1 PAIR ON A CARD.*

J. NICKLIN & CO., Birmingham, England
Agent: F. P. ROGER, 30 Wellington St. W.,
Toronto.

REGISTERED
SAJONIC
TRADE MARK

SHOT.

In ordering, please specify **The Abbey Improved Chilled Shot Co., Ltd., New-castle-on-Tyne.**

N.B. We also make Hard and Soft Shot but strongly recommend Improved Chilled Shot for penetration.

N.B. The only Company in Great Britain devoting its whole time to Shot making.

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and ELECTRO PLATE.**

Ask for our Catalogue and Quotations.



Dundas Axe Works

DUNDAS, CANADA.

Write for Prices

P. BERTRAM, - Manager.

STEEL STAMPS

For Manufacturers of
MACHINERY and METALWARE

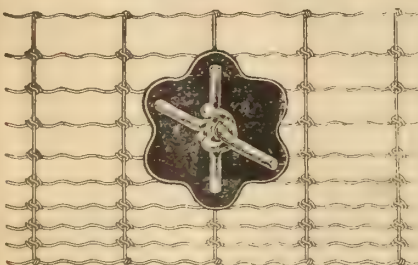
All our work is guaranteed to be satisfactory.

THE PARSONS-IRONS CO.

58 Adelaide St. W., TORONTO.

Your Customers

the farmers are looking for a fence, strong, serviceable and durable at a reasonable cost. You can supply it to them in the

IDEAL

It is strictly up-to-date and the best value to be had in wire fencing to-day.

A GOOD SELLER

We have a style for every purpose in either heavy or light fencing. Write for catalogue showing fencing and gates.

Coiled-Spring Wire

unexcelled in quality, shipped promptly

THE

McGregor-Banwell Fence Co.

Limited

Walkerville, Ont.

MERRICK, ANDERSON & CO., Winnipeg
Sole Agents for Manitoba and N. W. T.



This design a guarantee of quality

Heavy Red-Brown Wrapping
FOR EXPRESS PARCELS.

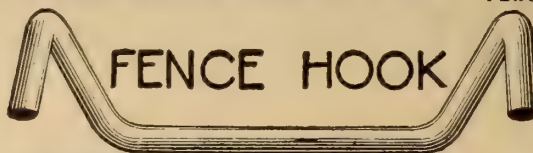
STRONG, TOUGH AND STIFF

SAMPLES AND PRICES
GLADLY SENT

CANADA PAPER CO.
Toronto LIMITED Montreal

GALVANIZED FENCE HOOK

FOR FASTENING WOODEN PICKET ON WIRE FENCES



FENCE HOOK

WIRE NAILS, COILED SPRING, BARB and PLAIN FENCE WIRE, OILED and ANNEALED, CLOTHES LINE WIRE, STAPLES, etc.

THE WESTERN WIRE & NAIL CO., Limited,

LONDON, ONT



"Little Shaver"

Canadian Agents:

E. H. GRENFELL & CO.
LONDON, ONT.

Cutest Thing in the Kitchen

Shaves chocolate so thin that it dissolves without stirring.
Slices Potatoes, Radishes, Cucumbers, Onions, Apples and all the smaller fruits and vegetables
Made of black walnut.
Knife is fine tempered steel.

MADE ONLY BY

J. M. MAST MFG. CO., Lititz, Pa.

SPRINGS

FLAT-SPIRAL OR VOLUTE

INTERESTING CATALOG MAILED ON APPLICATION

THE WALLACE BARNES CO.

BRISTOL CONN.

DILLON FENCING

THE HINGE IS COMPLETE, AND WORKS WITH THE UTMOST FREEDOM.



Sold to the trade only.

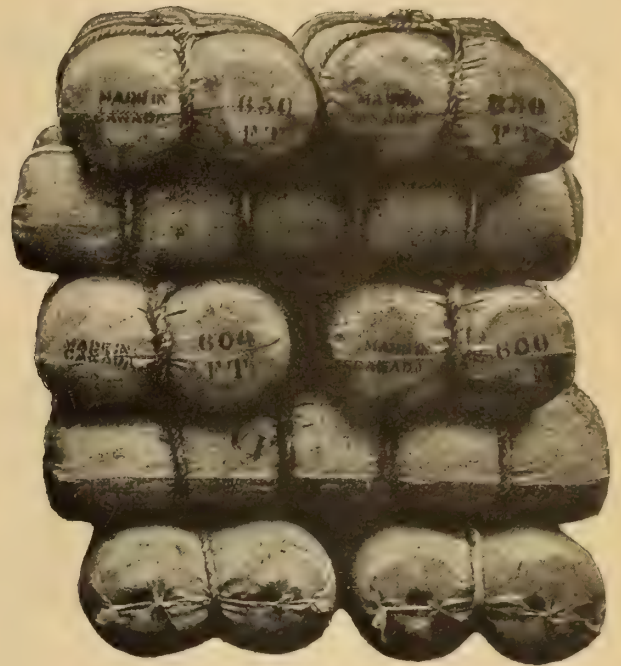
CAVERHILL, LEARMONT & CO., Agents
at Montreal and Winnipeg.

Manufactured and sold by
OWEN SOUND WIRE FENCE CO., Limited
Owen Sound, Ont.

CANADIAN CORDAGE

& MFG. Co., Limited.

BINDER TWINE.



"ROYAL" MANILA, 650 ft. to the pound.
"ROYAL" MANILA, 600 ft. to the pound.
"ROYAL" MANILA, 550 ft. to the pound.
"ROYAL" MANILA, 500 ft. to the pound.
STANDARD, - 500 ft. to the pound.
SISAL, - - 500 ft. to the pound.

Our "ROYAL" Brand of Binder Twine is manufactured of the finest raw material that can be obtained, and with the utmost care. For length and strength we have no competitors. Our twine is manufactured with the latest machinery, and dealers desiring to have exclusive agencies should apply at once.

Write, Wire or 'Phone.

CANADIAN CORDAGE & MFG. CO., Limited
Peterborough, Ont.

THE AUER GAS LAMP.

"TURNS NIGHT-TIME INTO DAY-TIME."

New Styles. Lower Prices.

Do you want a lamp which
won't tire your eyes?

Do you want a lamp which
makes sewing or reading
a pleasure?

Do you want a lamp which
gives more light than
half a dozen kerosene
ones for less money?

Do you want to sell the best lamp on the market?

===== THEN WRITE FOR =====
OUR CATALOGUE AND DISCOUNTS.

Every Lamp Guaranteed.

AUER LIGHT CO., 1682 NOTRE DAME ST., MONTREAL.

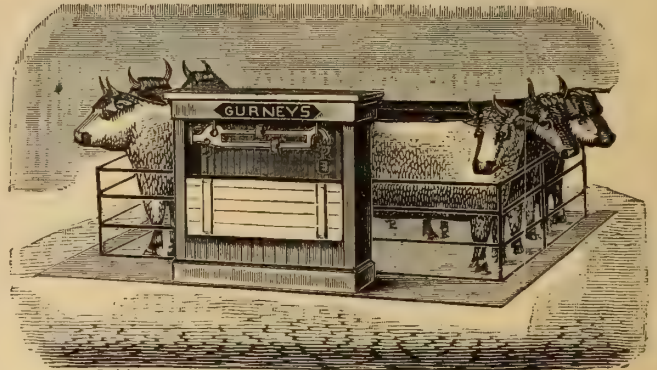


No. 21
100 Candle Power.

THE GURNEY STANDARD SCALES

Absolutely Accurate and Reliable. The Best of Material
and Workmanship. Recognized throughout Canada as

"THE STANDARD"



We make scales of every description. Established 1856.
Send for catalogue and printed matter.

The Gurney Scale Co., Hamilton, Ont.

Eastern Warehouse :

Western Warehouse :

The Gurney-Massey Co., Limited Montreal, Que. The Gurney Stove and Range Co. Limited, Winnipeg, Man.

SEASONABLE GOODS for PRESERVING TIME.

KEMP'S ENAMELEDWARE

Manufactured in the THREE POPULAR GRADES.

DIAMOND=====PEARL=====GRANITE



How is your stock?

It should be very complete at this season.

We can supply your requirements promptly on receipt of order.

We use the utmost care in handling our goods and you can therefore depend on A1 quality.

A full stock of metals always carried in stock, such as Galvanized Iron, Canada Plate, Tinplate, etc., etc.

KEMP MANUFACTURING CO., TORONTO, CAN.

GOSSIP ABOUT OURSELVES

A Personal
Talk by
The Editor

FEW business men realize how constant is the shifting of authority and responsibility in the commercial world. Bradstreet's is authority for the statement that 26,000 new firms are formed in Canada in one year (including changes in partnership, as well as distinctly new concerns.) Think of it! Just about 500 new firms per week! It is a remarkable showing: one that any aggressive business concern must take into full reckoning. A trade paper, like Hardware and Metal, covering the Dominion from Sydney, N.S., to Dawson City, is vitally affected by this condition. To fail in recognizing its importance would be to lose prestige and influence. To recognize it and to continue a systematic study of the changes and to follow them up, with a view of securing as many of the new firms as subscribers as possible is to make Hardware and Metal more and more influential every week.

A new subscriber to a trade paper means infinitely more than to any other class of newspaper published. For instance, a subscriber to Hardware and Metal represents the purchasing capacity of hundreds, sometimes thousands of customers. His reason for subscribing to the trade paper is to extend his knowledge of his business, to keep in touch with developments in his line. He reads the advertisements as well as the reading columns of the paper, from the standpoint of an expert, of one vitally interested. The new subscriber generally finds the advertising pages of particular interest to him. He is in many cases influenced to add to his stock lines that he might not hear of for weeks (if ever), except through the trade paper. His mind is open for suggestions, and the advertiser who has anything to say which is worthy of

his attention, can expect an attentive, expectant hearing.

Yet, while so much attention is paid to the new subscriber, we never lose interest in those who are now numbered among our regular subscribers. We do not fail to appreciate the fact that Hardware and Metal owes its prestige and scope as an advertising medium to the subscribers who year after year have studied its columns, and who have been so enterprising in following up a good suggestion, whether it be in the editorial or advertising columns. We have, however, reached the stage wherein we now have on our subscription list the great bulk of those now engaged in the hardware and various metal trades.

HEATING AND PLUMBING NUMBER.

An Appropriate Cover.
About One Hundred Pages.
Many Technical Articles.
Report of Master Plumbers' Convention.

Will be sent to all Hardwaremen,
Stove Dealers, Tinsmiths, Plumbers
and Architects, as well as Machinists
and Foundrymen.

To be issued July 23, 1904.

Consequently, our growth must come from the new firms.

* * *

An interesting experience has just been related to me by a retailer who does a moderate jobbing business. Some time ago he inserted a quarter-page advertisement in Hardware and Metal. The wording of the advertisement was such that the representative of the paper who accepted it frankly informed the hardwareman that he doubted if it would sell enough goods to make its insertion of practical value. The answer was that he had thought over the matter carefully, and desired

to make the experiment, anyway. The advertisement was consequently inserted. This week the hardwareman explained his theory, and the results of his experiment. He had, he said, come to the conclusion that he was not as well known by manufacturers as the extent of his business, jobbing as well as retail, justified. So he had tried the advertisement in Hardware and Metal. Time has shown it to be an exceedingly profitable investment. The most important result has been that many houses who formerly paid no attention to him have instructed their representatives to call on him. In one instance alone he saved more than the cost of the advertisement on a purchase of a special line (not hardware), which he formerly had to purchase in a roundabout way, and at an advance of 33 1-3 per cent. over the terms he is now able to secure. The traveler carrying this line had never heard of him, but had received instructions from his principals, who mentioned the advertisement, to call on him. The moral in this experiment surely is that it pays to be well known, and that the buyer should be as eager for recognition as is the seller.

* * *

Have you considered your relationship to the advertisers in Hardware and Metal? It is so vital that it is worthy of your closest study. It may be laid down as a general fact that advertisers would not use space in this paper unless they were convinced that what they had to say would be of profit as well as interest to the retailer. Granting this, you will at once recognize that it would be wise to make a practice of reading each week the advertisements from cover to cover, and of writing for full information when anything appears which offers a possibility of increased business.

If all our readers were to do so they would undoubtedly contribute to making the paper more valuable to our advertisers and to the publishers. But we could not expect you to follow up the advertising so closely unless you were to receive the major portion of the benefit from doing so. It is, however, beyond question that a judicious study and ready responsiveness to advertising would be beneficial to you in many ways. The most important of these would be that it would keep you in touch with trade, keep you informed regarding new lines. It would, moreover, add to your knowledge of advertising, help you to express yourself regarding your stock, and in many ways broaden and strengthen you as a business man.

FOR THE CLERKS.

We are always on the alert for a suggestion which will enable us to improve Hardware and Metal in any way. Can you send us one? We are ready to give a year's subscription to the clerk who will send us the best suggestion within a fortnight.

We want articles which will be of interest to our readers. We are willing to pay for anything which we can make use of. Write us on account of some labor saving device or some trade-winning scheme which you have found a success.

We are anxious to get photos of store windows. We want them so bad that if you have a window which you are proud of we would like you to have a photo of it taken and send it to us. If it is satisfactory we will pay the photographer's charges and have a cut of the window inserted in the paper.

NEW STEAMSHIP SERVICE.

GREAT interest is being taken in Montreal just now in the probability of a new line of steamers being placed on the Atlantic service by the Canadian Lines, Ltd. This company is already doing business between Havre and Rotterdam, and Quebec and Montreal, and among their vessels are the steamers Halifax and Quebec. Last week the Elder-Dempster steamer Lake Simcoe, a large passenger vessel, was chartered by this company for this trade.

There is a likelihood also of the well-known liner Lake Erie being added to the fleet. It is understood that Sir Alfred Jones, president of the Elder-Dempster Co., is extensively interested in this new movement. Many ideas have been discussed, referring to the possibility of expanding the service to Bristol, and to other well-known ports, in order to meet the requirements of the rapidly increasing Canadian trade.

INCOMPETENT CLERKS.

"I WAS sitting in a fair-sized hardware store the other day," said a traveling salesman for a hardware jobbing house, "waiting for a chance at the proprietor, when I heard a woman endeavoring to make a purchase of a clerk. No, I don't mean that he was trying to make a sale to her. I stick to what I said. She evidently wanted to purchase a number of articles, and he seemed to be doing his best to prevent her.

"He was busy putting figures on a lot of tickets, and kept at it all the time she was talking to him. 'Do you keep those things for cleaning out sinks?' she asked. 'Do you mean a pot-scraper?' 'No, a thing to clean out sinks. One of my neighbors was telling me about them.' 'We may have them, but I have never seen any of them.' All the time he was at the tickets and never looked up at her.

"Are those mouse-traps?" she went on, and pointed to a shelf. 'Yes,' he said. 'How much are they?' He named a price, still busy with his pen.

"She walked over to a show-case and looked it over. Then she came back. 'Do you warrant your shears?' she asked. 'I was awfully sold on the last pair I got, but I didn't buy them here. Do you warrant yours?' 'Some of them we do, and some we don't.' He dipped his pen and began on a new lot. She stood still for a moment. Then she said, 'Is your silverware any less than it was before the holidays?' 'The boss was talking about marking some of it down, but I don't know whether he has or not.' Silence on both sides. Then he said, 'Do you want any of it?' 'Not unless it is a bargain.' Neither she nor I found out whether he had a bargain or not, for he never opened his head. She stood about in an uncertain manner, moved up towards the door, and in a little while gradually worked her way into the open air.

"Determined to find if he was actuated by any motive except bull-headed, jackassical stupidity, I said, 'Is her credit bad, or what's the matter with her?' 'Never saw her before in my life,' he responded, as he went on with his tickets.

"No wonder a lot of fellows who start out in business end up in the poor-house. I wish I had been the owner of that store for about an hour. That clerk would have hit the pavement hard when he landed."—Lewis Bartram, in an exchange.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

A Retailer's Catalogue.

RETAIL hardwaremen, especially those who do a jobbing business in their district, have in recent years manifested a disposition to meet the aggressiveness of the catalogue houses in a practical way by the distribution of catalogues to all local buyers. M. W. Howell, successor to McKenzie & Howell, Goderich, Ont., is one of this class of enterprising merchants. He this year issued a catalogue of forty-six pages, exclusive of inserts, comprising all hardware lines, including, in addition to regular shelf and heavy hardware lines, such specialties as stock food, sewing machines, silverware, belting, babbitt metal, etc. In the preface to this excellent catalogue, Mr. Howell writes, over his own signature, as follows:

"The bringing together of so many lines of merchandise under one roof has reduced the proportionate cost of selling, so that there is a saving in dealing with us.

"It is our determination that the name 'Howell' shall be recognized throughout Huron as a guarantee of honorable dealing, quality of goods sold and good values.

"We appreciate the fact that your friendly attitude and generous patronage have contributed toward our success. By our conduct and attention we hope to merit your confidence.

"During the past year manufacturers and wholesalers have so shortened their terms of credit that it compels us to ask of you as far as possible to pay cash. We are offering a very liberal cash discount, believing that the cash customer should get the benefit of paying cash."

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

Vacuum Steam Heating.

Hardware and Metal has received from Arthur McGonagle, 136 Liberty street, New York, a copy of his handsome little catalogue on the vacuum system of steam heating. This catalogue gives a short synopsis of the different systems of heating, pointing out the advantages and disadvantages of each. Plumbers and manufacturers should be interested in the topics discussed in the booklet, and readers of Hardware and Metal may secure a copy upon application.

Northern Electrical Mfg. Co.

Bulletins Nos. 30 and 35 have just been received from the Northern Electrical Mfg. Co. No. 30 is devoted to the description of direct current generators, while No. 35 is devoted to multipolar motors. The descriptions of the generators and motors is very instructive and interesting, and these bulletins should prove of value to any intending to purchase any electrical machinery. They may be had by applying to the Northern Electrical Mfg. Co., Madison, Wis., mentioning this paper.

Bradford Lathes.

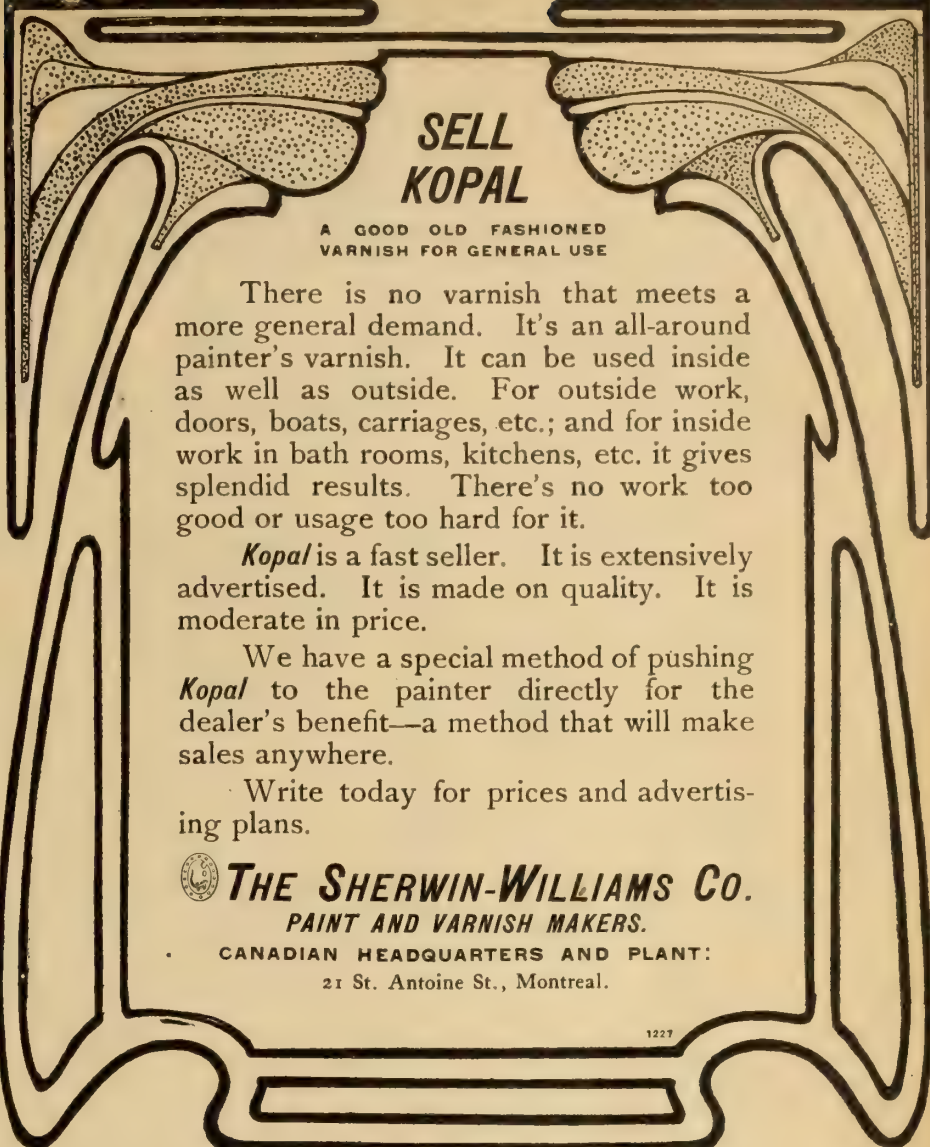
The Bradford Machine Tool Co., Cincinnati, O., are sending out a handsome lathe catalogue containing fine illustrations and descriptions of lathes manufactured by them. A complete line of lathes are therein illustrated, and any manufacturer contemplating the purchase of a lathe would be interested in this catalogue. The building of lathes is this firm's exclusive specialty, and they have complete equipment for their production. Readers of Hardware and Metal may secure one of these catalogues upon application to the Bradford Machine Tool Co., Cincinnati, O.

Air Compressors.

Catalogue A, from the American Air Compressor Works, describing and illustrating all kinds of air compressors, has been received. This catalogue goes very fully into the descriptions and specifications of the various kinds of compressors. Besides this, they are sending out a little booklet entitled "Valuable Information Regarding Compressed Air Installations," which speaks for itself. The American Air Compressor Works, 26 Cortlandt street, New York, will mail these to any interested reader of Hardware and Metal upon application.

Steam Specialties.

The John Davis Co., Chicago, are sending out a little booklet describing and illustrating "Eclipse" steam specialties and plumbing goods. The illustrations are good and the descriptions



**SELL
KOPAL**

A GOOD OLD FASHIONED
VARNISH FOR GENERAL USE

There is no varnish that meets a more general demand. It's an all-around painter's varnish. It can be used inside as well as outside. For outside work, doors, boats, carriages, etc.; and for inside work in bath rooms, kitchens, etc. it gives splendid results. There's no work too good or usage too hard for it.

Kopal is a fast seller. It is extensively advertised. It is made on quality. It is moderate in price.

We have a special method of pushing *Kopal* to the painter directly for the dealer's benefit—a method that will make sales anywhere.

Write today for prices and advertising plans.

 **THE SHERWIN-WILLIAMS Co.**
PAINT AND VARNISH MAKERS.
CANADIAN HEADQUARTERS AND PLANT:
21 St. Antoine St., Montreal.

1227

concise. It may be had by applying to the company, mentioning this paper.

Planers.

The R. McDougall Co., Ltd., Galt, Ont., have issued a very handsome catalogue, describing and illustrating their line of planers. The appearance and general get-up of the catalogue is indicative of the progressive spirit of this Canadian firm. The typographical execution is fine, and the illustrations are exceptionally handsome. Prospective buyers may secure a copy of this handsome catalogue upon application, mentioning Hardware and Metal.

Automatic Lubricator.

The Greene, Tweed Co., exclusive manufacturers of the Improved Rochester Automatic Lubricator, are sending out their 1904 booklet on this lubricator. The different kinds are fully illustrated and described, and some of the advantages of the lubricator are given

in convenient form. Those interested may secure a copy of the booklet upon applying to Greene, Tweed & Co., 17 Murray street, New York.

Westinghouse Motors.

The Canadian Westinghouse Co., Hamilton, Ont., are sending out circular 1077, describing and illustrating type L motors. The detail construction is given. This type of motor is widely used for hoisting or intermittent service requiring a large torque. They are of the enclosed type, to protect them against the dust or dirt, and they are therefore well adapted for mills, foundries and other manufacturing plants. Being series wound for direct current, it is well adapted for starting and accelerating heavy loads. This bulletin should prove of interest to any intending making any such installation as these motors are adapted to. Readers of Hardware and Metal may secure one of these bulletins upon application.

Business Changes

ONTARIO.

Wm. Eizerman's planing mill, Mitchell, has been burnt out.

James Lee, harness maker, Listowel, has sold out to E. J. Gaetz.

Dominion Brass Works, Limited, Port Colborne, have obtained charter.

The assets of the Wakefield Mica Co., Ottawa, are to be sold July 9.

The Capital Sand & Brick Co., Limited, Ottawa, are to have assets sold.

Asa H. Raymond, manufacturèr, Essex, has assigned to E. A. Wismer.

R. W. Ross & Co., hardware dealers, Prescott, are succeeded by J. D. Mills.

John B. Atcheson, manufacturer of sashes and doors, Cornwall, has been burned out.

The Rat Portage Lumber Co., Ltd., Rat Portage, suffered by fire. Loss covered by insurance.

The Guelph Axle Mfg. Co., Ltd., Guelph, have changed style to Guelph Spring & Axle Co., Limited.

The St. Catharines Box & Lumber Co., Ltd., St. Catharines, suffered loss by fire. Covered by insurance.

A. A. Conover, dealer in agricultural implements and harness, Aurora, has advertised his business for sale.

QUEBEC.

The assets of H. Verreault, saddler, Levis, have been sold.

Cadioux & Bourque, plumbers, Montreal, have registered.

Boutet & Parent, blacksmiths, Quebec, have registered.

The Star Chrome Mining Co., Ltd., Montreal, are incorporated.

Lamarche & Benoit are curators for Mount Bros., electricians, Montreal.

Lamarche & Benoit are curators for E. C. Mount & Co., plumbers, Montreal.

H. Madore, Montreal (Edouard and Hector Madore) has registered as plumber.

John Feeley has registered under the style of the Feeley Mfg. & Plating Co., Montreal.

A. Ouellet, saw and grist mill owners, Ste. Angele (Rimouski Co.) have advertised mill and limits for sale.

Joseph E. Dupre and Louis A. Letourneau, have registered under the style of the Dominion Die Co., Montreal.

Quebec Nail Mfg. Co. have dissolved partnership. The new firm is composed of Chas. Ed. Boivin and Jos. Adolphe Grenier.

John W. Grace, of the Wm. Grace Co., contractors, Montreal, has registered as agent and representative in Canada.

IVER JOHNSON • AUTOMATIC • REVOLVERS



THEY PROTECT

DEALERS who buy them PROTECT their profits.
USERS who buy them PROTECT their lives and property.

Our extensive advertising insures a permanent demand and our reputation insures the best quality, which protects the dealer.

Our exclusive and patented safety mechanism used only on Iver Johnson Automatic Revolvers makes them **absolutely safe** and **accidental discharge impossible**, which protects the life of the user.

Send for our fire arms literature, mailed upon application.

IVER JOHNSON'S ARMS and CYCLE WORKS

NEW YORK OFFICE.

No 99 Chambers Street.

Fitchburg, Mass.

P. Colozza, general merchant, Chicoutimi, is asking for an extension of time.

Miller & Gagnon, grocers, Quebec, have registered.

L. P. Morin & Fils, lumber, sash and door manufacturers, St. Hyacinthe, have been burned out. Loss partially covered by insurance.

A meeting of the creditors of Bigonnesse & Sequin, general merchants, La-belle, was announced for June 23; assets to be sold on June 30.

Frothingham & Workman, wholesale implement hardware dealers, Montreal, have dissolved partnership. The new firm continue under name of Frothingham & Workman, Ltd. Geo. W. Eadie has registered as president.

MANITOBA AND N.W.T.

Code & Crozier, general merchants, Olds, have sold to Logan & Brown.

S. Feinstein, general merchant, Herbert, has sold out to A. E. Penner.

Gouin & Dube, general merchants, Montmartre, have dissolved partnership.

T. Rusk & Son, blacksmiths, Moose Jaw, has sold out to McDonald & Billings.

W. Stillwell, blacksmith, Medicine Hat, has sold out to Weatherbee & Schwartz.

D. Gerrard, hardware dealer, has sold out to the Manitoba Hardware & Lumber Co., Limited.

W. J. Robertson, of McKenzie & Co., grocery and hardware dealers, Winnipeg, has retired from business.

Snow & Crossman, manufacturers cement bricks, Regina, have been succeeded by G. T. Snow.

Reid & Spence, general merchants, Parr's Siding, have sold their hardware stock to W. V. Stevenson.

The stock of the estate of W. J. Heaslip, general merchant, Minto, was advertised for sale by auction on June 28.

NOVA SCOTIA.

The business of A. E. Cunningham, mason, North Sydney, is advertised to be sold out by sheriff.

NEW BRUNSWICK.

W. L. Mallory, general merchant, Perth, is dead.

G. B. Johnston, general merchant, Anagance, has sold out to A. M. Brown.

Mann & Ayer, general merchants, Petitcodiac, have dissolved partnership; there is a new co-partnership of D. S. & F. Mann.

E. B. Ketchum is provisional liquidator for the St. John Sulphite Pulp Co., manufacturers, Mispec.

Charles F. Baker, secretary of Randolph & Baker, manufacturers lime and lumber, Randolph, is dead.

BRITISH COLUMBIA.

Archer & Hodder, hardware dealers, Poplar, have been succeeded by E. L. Masterson.

Wilson & Barclay, general merchants, Silverton, have dissolved partnership.

S. Hagen, general merchant, Mount Sicker, has been burned out; loss covered by insurance.

July 2, 1904

HARDWARE AND METAL

H. S. HOWLAND, SONS & CO.

WHOLESALE
ONLY.

Telephone,
Office Park, 1584.

TEMPORARY WAREHOUSE:

212-218 Cowan Avenue.

SAMPLE ROOM at 21 Scott Street (Telephone

Main 4056)

(Where Orders may be left if not convenient to visit our Warehouse at Parkdale).

LIMITED
ONLY
WHOLESALE.

Telephone,
Warehouse, Park 1585.



Ball-Bearing.

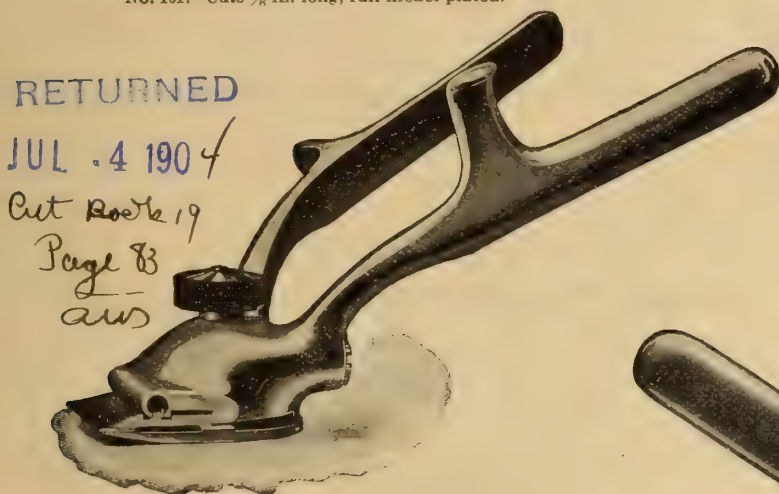
No. 101. Cuts $\frac{1}{8}$ in. long, full nickel plated.

COATES' TOILET CLIPPERS.



Ball-Bearing.

No. 191. Cuts $\frac{1}{8}$ in. long, full nickel plated.

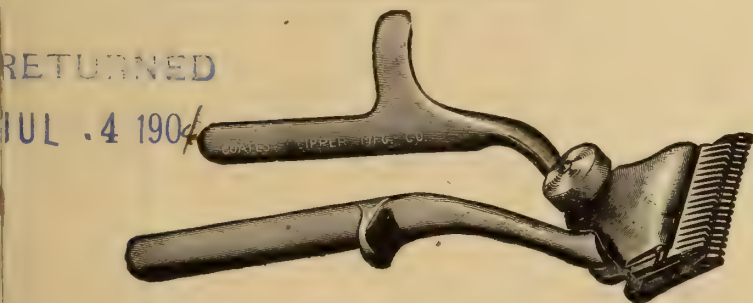


Ball-Bearing.

No. 151. Cuts $\frac{1}{8}$ in. long, full nickel plated.

FOR FETLOCK CLIPPERS, COARSE TEETH,
AND
HORSE CLIPPERS

SEE OUR HARDWARE CATALOGUE.



Ball-Bearing.

No. 141. Cuts $\frac{1}{8}$ in. long, full nickel plated.



"Yankee," full nickel plated.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.
Factory: Dufferin Street, Toronto, Ont.

Our prices are right.

TRUE BRAND CUTLERY.**POCKET CUTLERY****GUARANTEED QUALITY.****RAZORS
SCISSORS****BEST GOODS****RIGHT PRICES****E. F. WALTER & CO.,** 166 and 168 McGill St., **Montreal**

PRICE is a good thing,—but,
QUALITY is better.

Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

Wilcox Mfg. Co. of Ontario, Limited
LONDON, ONT.**LOOK AT THIS****Mr. Hardware Dealer***We can ship you from stock any size*

Shafting, Pulleys, Hangers, Couplings,
Floor Stands, Friction Clutch Pulleys,
Mule Pulley Stands, Binder Frames,
Guide Pulleys, Rope Sheaves, etc., etc.

you may require.

SEND FOR CATALOGUE No. 368

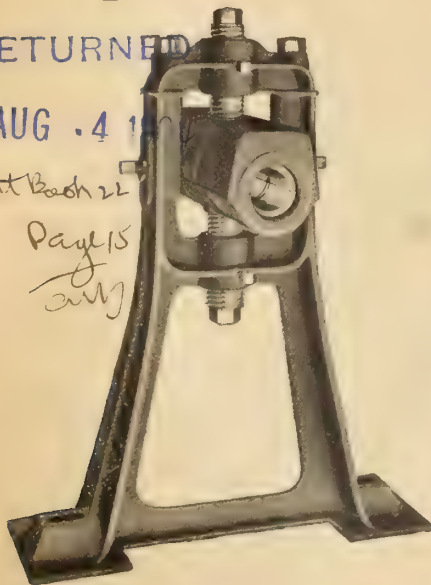
THE FAIRBANKS COMPANY

MONTREAL

TORONTO

WINNIPEG

VANCOUVER



MACHINERY

MACHINERY MARKET.

Quebec.

Office of **HARDWARE AND METAL**,
232 McGill Street.
Montreal, July 1, 1904.

MACHINERY business is livelier at present than it has been for several weeks past. There is a briskness such as has not been felt for some time, which seems to indicate the prospect of a large trade being done in the near future. While there is a good demand for the ordinary lines of machine tools, an unusually large order of railway shop machinery is reported. Saw mill installations are still being required, and several engine and boiler outfits have been placed this week. Electrical machinery is also being ordered to considerable extent, so that to all lines of the machinery business there is a vigorous and healthy tone. Shipments are still somewhat tardy, and inquiries are coming in at a greater rate than is usual.

Ontario.

Office of **HARDWARE AND METAL**,
10 Front street east,
Toronto, July 2, 1904.

THE machinery market presents a brighter situation this week than for some weeks past. The local dealers have a number of contracts in view, and it is expected that quite a number will be closed before this time next week. Inquiries have been quite numerous, many more than last week.

The demand for engines and boilers has been very good, and also for wood-working machinery for planing mills. This is the time of the year that extensions are made to planing and saw mills, and the time that new ones are being equipped with machinery. For this reason planing mill machinery is in good demand at the present time.

So much cannot be said for iron working machinery and foundry equipment. There is a fair demand for this class, but there are at present no large installations in sight that local dealers are interested in. On the whole, the prospects look brighter this week than last.

Machinery and Electrical Notes.

THE local directors of the Brantford & Lake Erie Electric Railroad are completing their right-of-way through the various municipalities.

A new \$10,000 iron bridge will be constructed at North Dumfries, Ont.

A new generator has been installed in the Winnipeg Electric Light power house.

The fourth annual picnic of the British Columbia Electric Railway employees was held recently.

Canada has at present nearly 19,000 miles of steam railroads, and 760 miles of electric railways.

Work has commenced on the new power house for the Colonial Printing & Bleaching Co., at St. Henri, Que.

Tenders are being called for the erection of an electric elevator at the Western Departmental Building, Ottawa.

Capt. Post, of Blenheim, has taken over the bulk of the stock of the Leamington Electric Light Co., Leamington, Ont.

The Levy, Weston & McLean Machinery Co., Toronto, have just shipped a 75 h.p. boiler, to be installed in the planing mill of S. Pomeroy, Orillia, Ont.

The foundry stock, machinery, patterns and castings of the estate of Wm. Clendinneng & Son, Montreal, has been sold to the McCleary Co. at 20 1-4 cents on the dollar.

The Robert Simpson Co., Ltd., are having an upright boiler installed by the Levy, Weston & McLean Machinery Co., in their new factory on Front street east, Toronto.

The Canadian General Electric Co., Toronto, have secured the contract for the equipment of the power house of the Toronto & Niagara Falls Power Co. at Niagara Falls, Ont.

The employees of the Brandon Machine Works, Brandon, Man., presented James Bell, the foreman of the works, upon his leaving, with a handsome case of pipes as a token of the esteem in which he was held.

Half the employees of the Dominion Coal Co.'s machine shop received no-

tice on June 22 that their services would no longer be required. The explanation given by the company for this line of procedure is that they feel the need of economising, in view of having cut off dividends.

The B. F. Sturtevant Co. have removed their entire plant from Jamaica Plain to Hyde Park, Mass. There they have nine acres of floor space, and with all modern appliances they will continue to manufacture their well-known products, blowers, engines, motors, economisers, forges, steam heating, ventilating and drying apparatus.

At a recent meeting of the shareholders of the Toronto Railway Co., a resolution was passed, ratifying the purchase of the Toronto & Mimico Railway Co., the Metropolitan Railway Co., the Toronto & Scarborough Electric Railway, the Light & Power Co., the Schomberg & Aurora Railway Co., and the Toronto & York Radial Railway Co.

The ratepayers of St. Catharines have carried a by-law taking \$20,000 stock in the Niagara, Queenston & St. Catharines Electric Railroad. This railway is to be run from St. Catharines through the fruit belt of Grantham to Niagara-on-the-Lake, thence to Queenston along the bank of the river, returning to St. Catharines through Niagara Township, forming a belt line of about 30 miles.

The Mexican Light & Power Co., Ltd., Montreal, have placed an order with the Ansonia Brass & Copper Co., Ansonia, Conn., for 1,500 miles of cable, weighing 2,000 tons, from the company's plant at Necaxa to Mexico City. The line will be supported on steel towers in spans of 500 feet. The Mexican Company's construction operations are among the most extensive ever initiated on this side of the Atlantic. The capacity of the Necaxa plant will in the first instance be 45,000 horse-power. Evidently there will be installed additional machinery, which will permit of the generating of 80,000 horse-power. The engineering part of the enterprise presents many unique features, such as the pur-

chase of several villages in the vicinity of Necaxa, which will be demolished to make room for the largest dam ever constructed.

The Electric Drive.

IN a book just published by Magnus MacLean, M.A., D. Sc., on modern electric practice, the author states in one chapter that there are few, if any, operations performed by gas or steam engines, which may not be accomplished with at least as good efficiency by the electric motor, and in the majority of cases better all-round results are obtainable. The most apparent advantages of an electric drive, for such purposes, are stated as follows: "Good speed regulation for varying loads; high efficiency at all loads; economy of space occupied by motors; economy in cost of power; economy in transmission and in application; absence of heavy foundations; freedom from vibration, noise or smells of any kind; attendance reduced to a minimum; skilled attention unnecessary, except for occasional surveys; wearing parts few in number, and cheap to replace; risk of breakdowns comparatively light; small capital outlay; small consumption of energy, because the power is automatically to the load.

"For factory purposes it does not often happen that motors of less than one half h.p. are required, and more frequently machines from one h.p. to fifteen h.p. are found to be suitable. In laying out a new factory, or altering an established one from gas or steam to electric driving, there are several broad issues to be considered and weighed very carefully before the scheme be decided on. First, the operations to be performed should be considered, whether they are mainly continuous or intermittent, whether all the plants must be kept running, or whether any part of it may be shut down for periods without seriously affecting the economy of the operation. It happens in some instances that one or two large motors may be conveniently arranged to drive a small factory through line shafting, more conveniently than a number of smaller motors connected to separate drives. In other cases, such as printing establishments, it is usually found more economical, in spite of the increased capital outlay, to drive each large machine by separate motors. Then the question of cost is to be considered, and it is necessary to balance the cost of the existing

system against the interest, sinking fund and maintenance of an electric drive. In some cases it will be found that the interest on capital outlay, due to scrapping an old and purchase of new plant added to even charges, would be so large as hardly to warrant a conversion, having regard to the interest of the shareholders, although there would be no question of a proper course in starting at first."

It is further stated that in connection with motor drive, that not only is the loss in heavy main shafting obviated, but since a well-designed motor is capable of 50 per cent. overload for short periods, and over 100 per cent. for very short periods, motors of smaller rated power are permissible for the several lines than would be safe with steam or gas engines, and the aggregate load for the power of the engine and boilers, being so much less than with the old system. These considerations help to explain how it is that much less boiler power is required to drive given works through dynamos and motors than with separate engines, or engine driving through main and line shaftings.

G. T. R. Shops Extensions.

IN an interview in the Stratford Beacon, Robert Patterson, master mechanic in the G.T.R. shops at Stratford, Ont., stated that building operations would be started as soon as contracts can be let. The new buildings will consist of new boiler shop, 169x120 feet; new tender shop, 326x102 feet; new carpenter shop, 100x63 feet; a new brass foundry, 75x40 feet, and enlarged blacksmith and erecting shops. All the buildings will be built on modern lines, the framework being entirely of steel, the foundations of concrete, and the superstructure of brick.

At the same time, Chas. M. Hays, general manager of the G.T.R., in a letter to the Montreal City Council, asking for a fixed assessment, states that the company has found it necessary to materially enlarge its shops, and are considering as their site "Point St. Charles, in preference to other localities (either in the vicinity of Montreal or elsewhere), which this company control, and for this purpose have secured an option on a large block of property adjoining our present shop grounds (on the south), east of Leber street."

Standard Technical Works

Books Written for the
Metal Merchant or
the Metal Worker.

A Manual of Mechanical Drawing.

By Philip D. Johnston; 65 full-page plates and 2 folding plates, with full text and 134 illustrations; cloth.....\$2.00

Domestic Electrical Work.

By W. A. Wittbecker. How to wire buildings for bells, alarms, annunciators, and gas lighting from batteries. 55 pages, illustrated; paper, 25c.; cloth.....50c.

Ladd's Discount Book.

By W. J. Ladd, showing net of any sum at all discounts; cloth, \$3.00; double indexed.....\$4.00

Blue Print Making.

A pamphlet. Directions for Constructing and Printing Frame, Preparing the Paper and Making Prints of Various Kinds. 28 pages.....25c.

Architects' Handbook on Cements.

By Addison H. Clarke. Specifications for mixing and using cements. 96 pages....\$1.00

Metallurgy of Cast Iron.

By Thos. D. West. Showing processes involved in its treatment, chemically and physically, from the blast furnace, through the foundry, to the testing machine. 627 pages, 153 illustrations....\$3.00

Galvanizing and Tinning.

By W. T. Flanders. Coating with tin and zinc; also tinning gray iron castings....\$2.00

Practical Plating and Polishing.

Best and Most Approved Methods of Preparing and Cleaning all Metals for Electro-Plating and Polishing. 114 pages, illustrated.....80c.

New Metal Worker Pattern Book.

By Geo. W. Kittredge. Pattern cutting as applied to all branches of sheet metal work, 430 pages, 744 illustrations.....\$5.00

Tinners' Helper and Pattern Book.

By H. K. Vosburgh. Rules, diagrams, tables, 123 pages, 53 figures.....\$1.00

Roofing, Cornice and Skylight Manual.

Laying flat and standing seam roofing, cornice shop practice and skylight construction, 175 pages, 170 illustrations and 13 plates.....\$1.50

Furnace Heating.

By Wm. G. Snow. Comprehensive treatise on warming buildings with hot air, with appendix on furnace fittings, 170 pages, 90 illustrations, cloth.....\$1.50

Plumbing Problems.

House drainage and plumbing, 244 pages, 146 illustrations.....\$1.50

Practical Hints on Joint Wiping.

For beginners in plumbing, 66 pages.....25c.

Enquiries for above books should be
sent to The Editor

HARDWARE AND METAL,
Montreal **Toronto**

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

NEWMAN'S PATENT INVINCIBLE FLOOR SPRINGS

Combine all the qualities desirable in a Door Closer. They work silently and effectually, and never get out of order. In use in many of the public buildings throughout Great Britain and the Colonies.

MADE SOLELY BY
W. NEWMAN & SONS, Birmingham.

WHY NOT BUY

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Brass Globe, Standard and Copper Alloy Discs, Steam and Hot Water Radiator Valves, Brass and Iron Weber Gate Valves, Check Valves, etc.

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THOSE WHO DO GET SATISFACTION.
SEND FOR CATALOGUE.

THE KERR ENGINE CO.,
WALKERVILLE, ONT. Limited

SPECIFY



INJECTORS

PENBERTHY INJECTOR CO.,
LIMITED.

BRASS MFRS.

Windsor, Ont.

TRUCKS

for Warehouse
and Factory.



Save You Money
Do Men's Work
Draw no Salary

Our Trucks are guaranteed satisfactory.
Turn in their own length.

MADE IN CANADA.

H. C. Slingsby for Canada.

Factory, Temple Building,
Ontario Street, MONTREAL.



"Pullman" Lawn Sprinkler

IS YOUR ORDER IN?

Send for Folder No. 14.
PULLMAN MFG. CO
Rochester, N. Y., U.S.A.

WORK AND PRICES RIGHT
GALVANIZING
ONT WIND ENGINE & PUMP CO. LIMITED
TORONTO, ONT.

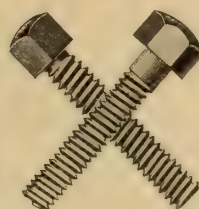
BABBIT

NO. 0
NO. 1
STAR
SPECIAL
HERCULES
METALLIC
IMPERIAL

QUALITY & PRICE TO SUIT
ALL GRADES OF WORK

THE CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



Cap Screws

Set Screws

Machine Screws

Cold Pressed Nuts

FINISHED AND SEMI-FINISHED

Special Milled Work, etc.
SPECIAL DISCOUNTS TO THE TRADE

CANADA FOUNDRY COMPANY

LIMITED

Head Office and Works, TORONTO, ONT.

District Offices — Montreal, Halifax, Ottawa, Winnipeg, Vancouver, Rossland.

EMERY IS MOSTLY IRON ORE.

What the United States Government says :

"Emery is a mechanical admixture of corundum and magnetite or hematite. It is, of course, the presence of corundum in the emery that gives to it its abrasive qualities and makes it of commercial value, and the abrasive efficiency of emeries varies according to the percentage of corundum they contain."—*Bulletin of the United States Geological Survey, No. 180, page 9.*

The diamond is crystallized carbon ; corundum is crystallized alumina. Corundum is next in hardness to the diamond.

Craig Mine Crystal Corundum is the only pure corundum on the market. It has 95 per cent. to 98 per cent. pure corundum, as against the 30 per cent. contained by most emeries.

The Canada Corundum Company, Limited
TORONTO, CANADA.

Note :—Craig Mine Crystal Corundum grains are numbered as follows :
12, 14, 16, 20, 24, 30, 36, 46, 54, 60, 70, 80, 90, 100, 120, 150, 180, 200.

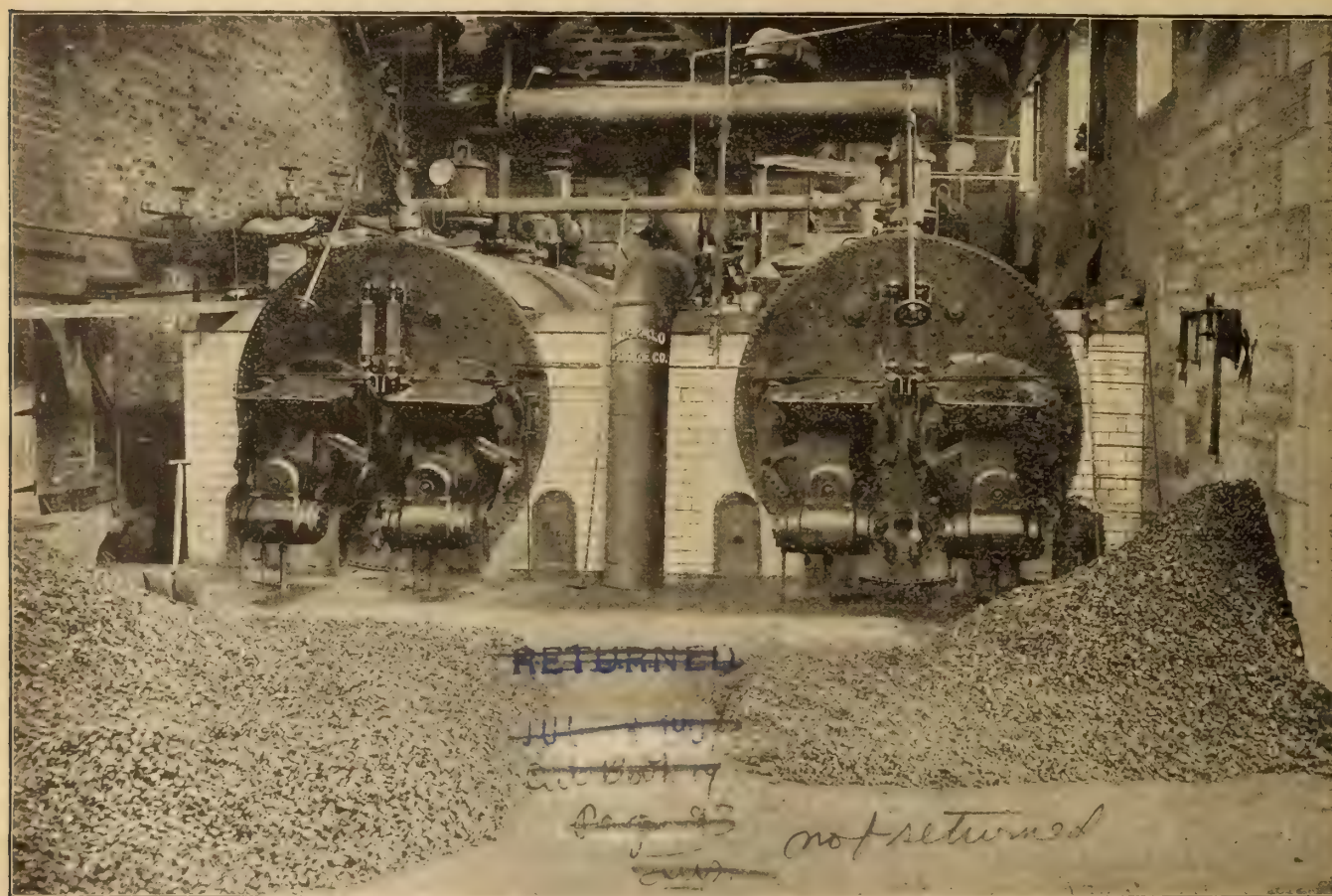
Mechanical Draft at St. Louis Exposition.

It is doubtful if there are any two buildings within the bounds of the great Louisiana Purchase Exposition that are more intensely interesting, or are more thoroughly inspected by the immense throngs of visitors, than the machinery hall and its nearest neighbor, the steam, gas and fuels building. The central location of the first mentioned, the large area of ground which it covers, and the character and number of exhibits which fill it to overflowing, make it one of the most important edifices on the ground. The steam, gas and fuels building, while it does not cover nearly

On approaching the exterior of this latter building one's attention is first attracted by the short steel stacks, arising from the roof; quite a contrast to the tall stacks used at Paris and some of the other expositions. These steel funnels are, of course, indicative of mechanical draft apparatus, which is furnished, fans and engines, by the Buffalo Forge Co., of Buffalo, N. Y., for a total of 16,600 horse power boilers of various types. The stacks mainly noticeable and referred to above, are for the horizontal boilers only, the upright boilers, of which there are a number,

of sufficient capacity to handle the entire load.

All of the fans are driven by direct-connected Buffalo horizontal engines, and a rigid sub-structure is employed to support the engines and outboard bearings, which carry the weight of the over-hung blast wheel. A large bowl is provided in the engine side of the fan housing and the sub-structure is extended into this space, allowing a water cooled, self-oiling bearing to be placed close to the centre of gravity of the wheel. The fans are heavily built and braced to support the weight of the



Installation by the Buffalo Forge Co.

so large an area as most of the other important structures, is quite important as it contains the immense boiler plant which furnishes power for the entire exposition. The 10,000 engine horse power which has been provided is furnished by engines located in one end of the machinery building, while the entire space taken by the boilers themselves occupies a considerable part of the 100,000 square feet of floor space which the steam, gas and fuels building contains.

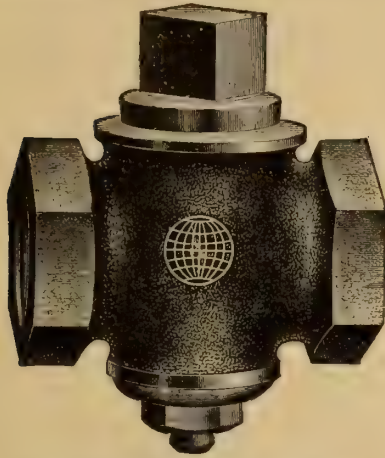
having each its own separate and much smaller smoke pipe.

All of the boiler plants are of special interest, not only on account of the large capacity of batteries served, but because of the fact that they are expected to run continuously at from 25 to 50 per cent. above rating. This requires an intense draft and fans running at unusually high speeds for such large units. Wherever possible duplicate fans have been installed, each one being

stacks, which have ornamental tops and are built of $\frac{1}{4}$ in. and 3-16 in. plate.

The first battery to be installed consisted of eight 400 horse power boilers, builders' rating, Heine boilers, which, when running at 25 per cent. overload, will deliver 4,000 horse power. For this battery two 240 in. Buffalo fans, with 14 feet blast wheels, $5\frac{1}{2}$ feet wide, are used, each driven by a 14x14 centre crank engine. The maximum speed will be about 143 revolutions per minute,

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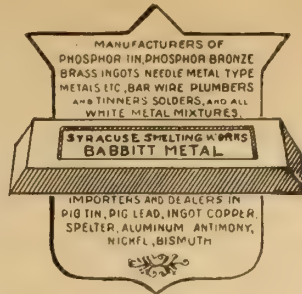
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and in order to run economically at large variations in load the eccentric is controlled by a link motion adjustable while the engine is running. The throttling governors vary the speed, and thus in order to secure any desired draft pressure, the governor mechanism may be adjusted in a minute for the desired speed, and the link motion set to secure the earliest cut-off possible. This feature has been adopted on all large induced draft installations made by the Buffalo Forge Co. for some time, and is claimed to insure economical operation at low speeds.

There are three independent groups of Cahall boilers of different types, the first two groups consisting each of four 508 horse power boilers, which will be run up to 50 per cent. overload, and on account of the lack of space it has been

are in duplicate, are designed for 2,550 horse power each, and will run at 175 revolutions per minute. These fans have blast wheels 12 ft. 4 in. in diameter and 4 feet wide, driven by direct-connected 12x14 engines. All of the engines are of the piston valve type, with removable bushings, forged steel shafts and cross-heads, and are of the same design and finish as regularly furnished for similar work by the Buffalo Forge Co.

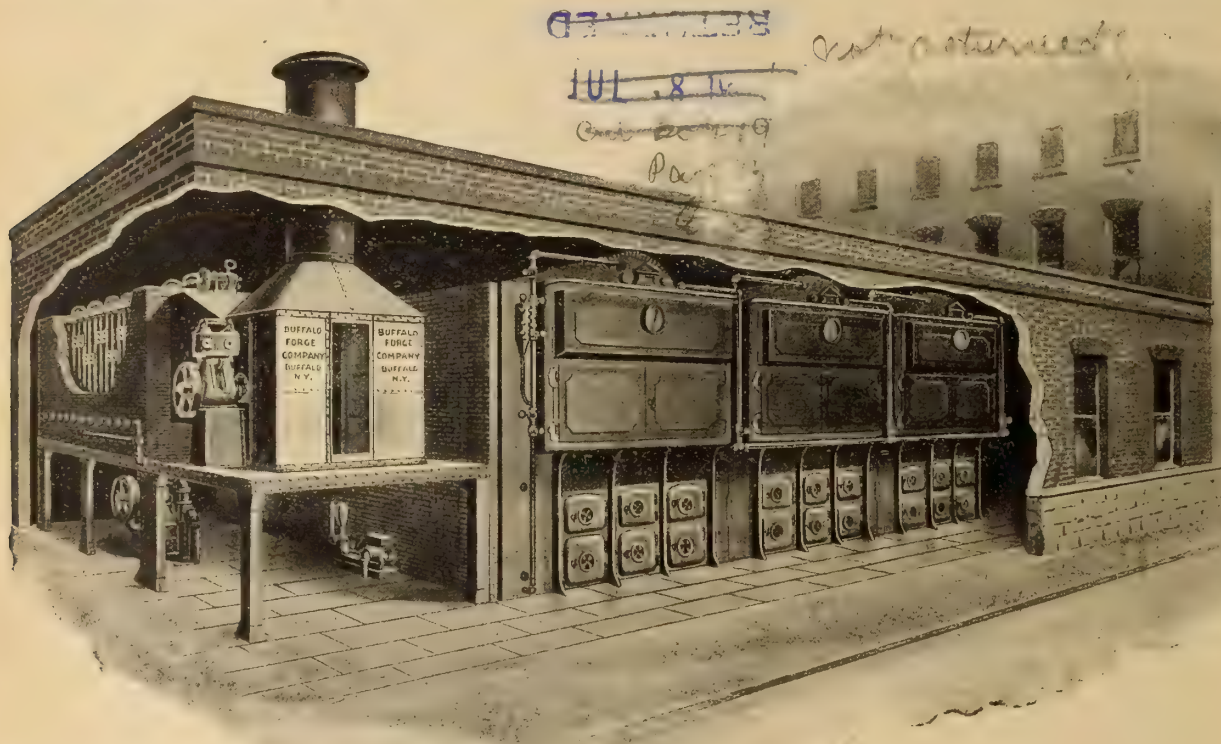
The Question of Lathe Quality.

THE interest in the recent discussion in Hardware and Metal regarding lathe qualities has lasted considerably longer than was anticipated when it was begun. Several letters regarding the question, too valuable to be left out, have come to hand since the

Canadian-made tools are by far the best tools we have in our shops. Those made by J. Bertram & Sons, Dundas, Ont., the R. McDougall Co., Limited, Galt, Ont.; Cowan & Co., Galt; and the McGregor-Gourlay Co., also of Galt, are superior in point of finish, strength and general utility, to those of either English or American make, as any person having an opportunity to view all the different machines together in the same shops would very readily conclude. We think the Canadian manufacturers are to be congratulated on the high degree of efficiency to which they have attained."

COWAN & CO.

Cowan & Co., of Galt, write as follows: "We have noticed the controversy in the Hardware and Metal as to the efficiency of Canadian lathes com-



Modern Boiler House with Induced Draft and Economizer

impossible to furnish duplicate fans. For each of these groups the fan is a 210 in., with a blast wheel 12 ft. 4 in. in diameter and 43 in. wide, driven by a 12x12 engine at 220 r. p. m. maximum. The third group of Cahall boilers is of approximately the same capacity as the Heine group, and the apparatus is of the same size.

The most prominent exhibit of foreign boilers is shown in the group including the Belleville and Niclausse types, the rated horse power of which will be 1,700, and, as it is expected that these marine boilers will be tested at a large overload, the induced draft fans, which

last reference to the matter in the paper.

THE MANITOBA IRON WORKS.

The Manitoba Iron Works, Winnipeg, express themselves as follows:

"With reference to the discussion which has taken place in your paper in regard to the merits of Canadian-made machine tools, we would like to say that last year we installed about \$40,000 worth of new machinery in our works at Winnipeg, purchasing Canadian, English and American tools, the English tool being a large 70 in., three-head pulley lathe, and we consider that the

pared with the American, and must say that our opinion is that the Canadian lathes are equal, if not superior, to the American, for our purpose, the manufacture of wood working machinery. Of course, the Americans make special lathes that there is only a limited market for in Canada, and where Canadians do not compete, but in lathes for general use the Canadian lathe is as convenient in its attachments, as well built and finished, and will turn out as accurate work and as much of it as the American. We have been giving some attention to this matter, and have recently installed seven new lathes manufac-

tured by the R. McDougall Co., of Galt, and after having given them a thorough trial we have placed our order with the same firm for three more. The reason we decided in favor of the Canadian lathes made by above mentioned firm instead of the American was that they were heavier, larger head stock and tail stock, much larger spindle, with wider pulleys than the American, all very essential points in getting the full benefit of high speed steel."

E LONG MFG. CO.

The E. Long Mfg. Co., Orillia, Ont., write as below: "Our attention having been called to the controversy which has lately arisen in The Canadian Hardware and Metal, in which various opinions have been expressed regarding Canadian-made machine tools, we beg to state that at the present time we are using a 36x36x12 planer, and a 20 in. engine lathe, made by the R. McDougall Co., of Galt, and that same are giving us the very best of satisfaction. They are quite equal to any American tool we have ever seen or used, and superior to very many, and we fail to understand why any firm who may require tools of this kind should use other than those "made in Canada."

Alcohol as a Motive Power.

THE alcohol question is a burning question in England, where German and French competition are seriously felt. The Manchester Guardian says: "The possibilities of alcohol both as a motive power and as an illuminant are rapidly developing, and it is a question whether something ought not to be done to endeavor, with due regard to the safety of the revenue, to remove some of the restrictions which prevent the growth of the trade in this country. Alcohol as a power for motor-cars may very soon prove itself to be the cheapest of all the various methods of generating force, and if this be so Great Britain will be kept behind the rest of Europe by her excise laws just as she has been kept behind in certain important branches of the chemical industry. In France we already see alcohol conveyed by road and rail in tank wagons, and the rapid increase in its use is sufficient proof of its economy. The economic production of alcohol has been left too long to France and Germany, but with a freer market for it there seems no reason why it should not be produced equally well in Great Britain. Besides the fast growing market for it as a motive power, there is yet another important market which will doubtless be developed in the course of the next few years. The incandescent spirit lamp should easily supersede the petroleum lamp if, by means of cheap alcohol, it is given a fair chance in the competition. There are advantages in luminosity, in cleanliness, and in security which could not fail to tell powerfully in favor of the newer illuminant."

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A GOOD second-hand engine wanted; about 75 horse-power; a self-contained one preferred. Apply to W. S. Piper, Fort William, Ont.

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WANTED—Foot lathe; describe and state lowest price. Box M 31, **HARDWARE AND METAL**, Toronto.

WANTED—30 to 40 h.p. high speed engine; in good order. Apply M 32, **HARDWARE AND METAL**, Toronto.

WANTED—A small second-hand nickel-plating outfit; state price and particulars to Drawer O, Renfrew, Ont.

WANTED—Good second-hand double spindle drilling machine, with a maximum distance between centres of at least 50 inches. Apply **HARDWARE AND METAL**, Toronto.

WANTED—Second-hand water motor—not less than 1½ horsepower or more than 2 horsepower; water pressure 45 lbs. Apply to Box 184, Cornwa 1, Ont.

WANTED—36 x 36 in. x 10 f. planer; 16 ft. lathe, 24 in. swing; and No. 500 belt drivers' drop hammer. Address Box M 145, **HARDWARE AND METAL**, Toronto.

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CANADA MACHINERY AGENCY, Montreal; new and second-hand machinery, engines, boilers, etc. Write for our list of second-hand stock.

ENGINE LATHE—Swings 17 in. over shears, takes 4 ft. between centres; good order; cheap for cash. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

FOR SALE—Brown automatic engine—cylinder size, 17 by 36; been used very short time. Toronto Carpet Manufacturing Company, Limited.

PUG Mills—All iron and steel; kiln doors in four sizes; bands, grates and a full line of brick-yard supplies. Address H. C. Baird & Son, Parkhill, Ont.

ROCK DRILLS—For water works, excavating, quarries and mines; steam hoists for builders, mines and quarries; simple, compound and triple marine engines for pleasure launches. The Dominion Rock Drill Co., Napanee.

STEAM and gasoline engine, boilers, grist, feed mill and elevator machinery. Wm. B. Lewis, 1-A Garry court, Winnipeg.

THE STUART MACHINERY CO., Winnipeg—Two hand-power freight elevators in good shape, cheap; one new 100 h.p. horizontal return tubular boiler, with full flush and all mountings; can ship immediately; one new 40 h.p. locomotive portable boiler; can ship immediately.

I 24" pony planer and 1 pedestal spindle carving machine, with countershafts. Apply Box M 33, **HARDWARE AND METAL**, Toronto.

HOISTING ENGINES, derricks, continuous concrete mixers, 250 yards capacity; dump cars, railway construction cars, track-laying tools, boilers, etc. Marsh & Henthorn, Belleville, Ont.

IRON PLANER—24 in. x 24 in. x 6 ft., second-hand in first-class condition, for sale, a quick turn over. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

NEW STATIONARY ENGINES—20 x 24 Waterous sawmill engine; 14 x 18 Waterous sawmill engine; 9 x 10 McEwen engine; 13 x 14 McEwen engine. Waterous, Brantford.

THE FAIRBANKS CO.—Temporary warehouse, 124 Bay—standard scales, valves, trucks, letter presses, shafting, hangers, pulleys, belting, mill supplies, machine tools; "Fairbanks" gas and gasoline engines; write for price list.

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ALL-ROUND machinist and blacksmith wanted, to take charge of general repair shop; wages \$2.50 per day. Buck & M'Lean, Norwood, Ont.

BRASS finishers wanted; fox lathe hands; steam gauge maker. James Morrison Brass Mfg. Co., 93 Adelaide street west, Toronto.

FIRST-CLASS man to operate 42" Bullard boring mill. Apply, stating experience, Vancouver Engineering Works, Limited, Vancouver, B.C.

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DRAUGHTSMAN—With three years' experience at mechanical work and draughting in a large machine shop, wants position with progressive machinery or foundry concern. Apply Box M45, **HARDWARE AND METAL**, Toronto.

ELECTRIC PLANT FOR SALE.

AN up-to-date electric plant, in town of Welland, for sale; good water power; satisfactory reasons for selling. Address The Welland Electric Light Co., Welland, Ont.

ELECTRICAL GOODS AND SUPPLIES

A New Incandescent Lamp.

THERE is an increasing demand for more light, and every effort is being made to supply electric light at the lowest possible cost, and with that object in view the Ontario Lantern & Lamp Co., Hamilton, have recently arranged to manufacture in Canada what is known as the Downward Electric Lamp.

This is a tipless lamp, with a special carbon, and it is claimed by the makers that it will produce from the bottom more than double the amount of light given by any other type of lamp (with the exception of the Shelby, from the same consumption of current. Consequently, this lamp is indispensable for stores, offices, factories and wherever useful light is desirable.

On account of this lamp being tipless it has a much better appearance, and it is the intention of this company to make and supply the same in all candle-powers.

Walter Grose, Montreal, is selling, from whom prices and all particulars may be obtained.

Electrical Progress in Canada.

AN interesting paper prepared by Geo. Johnson, Dominion statistician, entitled "The Statistics of Canadian Progress in Electrical Application," was read recently before the Canadian Electrical Association at Hamilton. In this paper the writer noticed that on May 21st last was the 60th anniversary of the sending of the first Morse message over a telegraph wire. The commercial use of the invention has so grown that there are now 1,764 private and Government cables, with a length of 201,576 nautical miles, and on land 5,001,200 miles of line, with a total estimated outlay of \$850,000,000. Over these the daily transmission is 1,400,000 telegrams, and 36,000 cables, with an annual total of 478,300,000 land messages and 13,140,000 cables. These figures do not include the press messages, which are large in proportion. In regard to miles of wire in proportion to population, Canada greatly exceeds the United States, which would have to add 200,000 miles to be equal.

Regarding electric propulsion the author stated that Canadian street rail-

ways during 1903, carried 167,704,000 passengers, which equals 26 per cent. of the city population, as against 37 per cent. in the United States. In Canada, in 1903, there were 46 street railways, with 455 miles of track, and capitalized to the amount of \$30,000,000 paid up capital, and \$17,000,000 bonded indebtedness.

In respect to telephones, Mr. Johnson said that in Canada there is one telephone to every 65 persons, and that the Summer of 1904 is the 30th anniversary of the invention of the telephone. Canada now has 815,000 instruments, an increase of 144 per cent. in the last four years.

In point of light and power, it is stated that Canada in 1903 had 321 establishments, employing 1,786 hands, with an invested capital of \$2,000,000.

RETURNED



Combination Wall Bracket.

For the same year the Dominion had 14,789 arc and 1,212,861 incandescent lights. Ontario is the largest user of electric lights, it having 203 of the 321 plants employed. British Columbia in this respect shows the largest proportionate increase. In concluding, Mr. Johnson stated that his belief in the outlook for the perspective development of the electrical industry in Canada was strong.

Wall Bracket.

The illustration shows a combination gas and electric bracket, sold by the Robert Mitchell Co. of Montreal. This is an illustration of a line of goods which might be handled to advantage by hardware stores in almost any town or city. In towns, many people have their own acetylene plant, and such a fixture which may also be used for electric lighting should be a good seller.

Use the Catalogue.

THE hardware merchant who sells electrical goods should make use of the catalogues issued by the supply houses. Most of these catalogues are models of what such publications should be, those illustrating fixtures in particular being the result of much painstaking effort. The excellence of many of these catalogues simplifies the problem with which the hardware merchant is confronted. Every one will admit that there are great possibilities in the development of an electrical department in the hardware store, but many dealers are frightened because they imagine that such a department necessarily means the investment of a large amount of money. They are not sure that they know what lines to stock, and they are afraid they may tie up their money in unsalable stock.

To all such the excellent catalogues of the supply houses offer an easy solution as they render a large stock unnecessary. The hardware dealer may build up a good business through using these catalogues, and build it up from a very small investment. For instance, it is not necessary to stock the more expensive lines of fixtures. Place in the store just a very few fixtures in order to show that they may be bought there. When a customer is not satisfied with the stock on hand, the chances are that he can easily be suited from the catalogue as the illustrations in most of them are very elaborate and the descriptions are complete. In previous issues of Hardware and Metal mention has been made of various catalogues. Write for any or all of these, and use them in the way indicated. With their assistance a small investment should lead to good profits. It is not too early to plan for an extensive Fall trade in lighting fixtures.

An International Agreement.

AT a special meeting of the stockholders of the Allgemeine Electricitäts-Gesellschaft, held in Berlin, February 27, to consider the amalgamation of that company with the Union Electricitäts Gesellschaft, a report was submitted by the chairman outlining the relations to be established between the consolidated company and the General Electric Co., of America, and its other affiliated companies in

Europe, such as the French and Mediterranean Thomson-Houston Co.'s, the Austrian and Russian Union Electricitäts Gesellschaften, and the Union Electrique, of Brussels. The element which unites all of the companies of this vast group is the interchange of patents and experience.

Under the new agreement the territories of the Allgemeine Electricitäts Gesellschaft and the General Electric Co., and its branch companies, are defined as follows:

The exclusive territory of the General Electric Co. comprises the United States of America and Canada, that of the A. E. G. Germany, including Luxembourg, Austria-Hungary, Russia in Europe and in Asia, Finland, Holland, Belgium, Sweden, Norway, Denmark, Switzerland, Turkey and the Balkan states. With regard to the territories of the various branch companies in Europe, separate agreements have been made. For the other continents, including South America, a joint working of the two large concerns is proposed, an arrangement which will no doubt result in a profitable joint undertaking. The subject of the Italian territory will be considered a little later on. The present condition of affairs will hold good in Spain and also in Greece.

The General Electric Co. and the A. E. G. will form a company, with a capital of 3,000,000 marks, for the exploitation of the Riedler-Stumpf and the Curtis steam turbine patents in the territory of the A. E. G. In this combination the Curtis patents are valued at 1,800,000 marks and the Riedler-Stumpf patent at 1,200,000 marks. The A. E. G. has secured a license to supply all non-European countries with this turbine, with the exception of the United States and Canada. In these latter countries General Electric Co. has secured the Riedler-Stumpf rights.

The rights for the use of the Curtis patents for marine engines have been secured by the International Curtis Marine Turbine Co. This company has given a license to the A. E. G. for its European territory, while the A. E. G. has allowed the Marine Turbine Co. to use the Riedler-Stumpf patents for its marine work.

For the purpose of working the steam turbine patent of Professors Riedler and Stumpf, the A. E. G. has formed a "Company for the Introduction of Inventions, Limited." The patents have now passed into the possession of the Vereinigte Dampfturbinen Gesellschaft, and in the United States in the hands of the General Electric Co., the marine

having been secured by the Marine Turbine Co.'s, and the inventors, Messrs. Riedler & Stumpf, derive part of the profits from the facilities granted to the A. E. G.

A similar contract as that concluded with the General Electric Co. has been made with the British Thomson-Houston Co. for the export trade. Various additional rights have been granted to the British company, such as a financial participation in the branch companies of the A. E. G. and of a company which may eventually be formed in Great Britain for the manufacture of Nernst lamps. The A. E. G. reserves also the right to supply turbines in addition to other manufactures. Kuhlow's German Trade Review.

Electrical Notes.

The Canada Electric Co. has made application to the Quebec Legislature at its recent session, for a bill giving to this company powers similar to those enjoyed by the Montreal Light, Heat & Power Co. That is, that they shall be able to enter the City of Montreal with poles and wires to conduct electrical energy, under the direction of the city committee, without having to apply to the city council. The bill was passed, but with amendments that materially limited its scope.

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THE KING.

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UNJUST AND UNBUSINESSLIKE.

IT is the boast of supporters of the Dominion Government that its administration of public affairs has been progressive and businesslike. In many respects this must be recognized, yet in other matters the policy of the Government is one that no far-sighted business would adopt.

We do not refer to such matters as the resignation of Auditor-General McDougall, or the case of the Davis canal contract, matters which are engaging the attention of the political press. Our reference is more particularly to the treatment of some of the more responsible servants of the Crown.

In the eight years since the Liberals attained power the cost of living in Canada has increased fully 50 per cent. The inevitable consequence of this change in conditions has been that business men of all classes have found it necessary, in order to preserve the standard of work in their establish-

ments, to advance the salaries paid, whether to untrained laborer or to general manager, in a material degree. In recent years we have heard of salaries which a few years ago were unthought of. The Government has recognized the altered conditions in the increased sessional allowance to members of Parliament, as well as in a general advance in the salaries of the employes in practically every department under its control.

Yet in spite of the increased cost of living; in spite of the fact that salaries of all classes of people have expanded, the Government continues to keep in office at the salary set at Confederation, the most responsible, the most honored servants of the Crown, the judges of the Supreme Court of Canada, men on whose decisions rest the disposition of millions of dollars, and on whose strength and ability the honor and integrity of our judicial system is in large measure dependent.

Viewed from any standard of comparison, the salaries of our Supreme Court judges is ridiculously small. Compared with the salaries attached to similar courts in other British colonies, weaker in every respect than Canada, or compared with the salaries paid to the men who attain to eminence in the Canadian industrial, commercial or professional world, and particularly when compared with the income of any first-class lawyer in this country, the stipend attached to the Supreme Court of Canada is shamefully small and inadequate.

Such a policy is unbusinesslike, as well as unjust. The sacrifice that any desirable lawyer would have to make to accept an appointment to the Supreme Court is such that many of them would not, or, rather, could not, accept it. Such a condition is inimical to the best interests of the business men of Canada. Deterioration in the personnel of that court would soon manifest itself in decisions which would destroy confidence in our whole judicial system.

The Dominion Government should

take up this matter in earnest during the present session, and place the salaries of our Supreme Court judges on a basis that would ensure the appointment of the most desirable men when vacancies shall occur.

A CRITICISM THAT STINGS.

CANADA'S petty treatment of her most honored and capable servants has not only aroused discussion at home, but has been the subject of unfavorable comment abroad. There is so much truth in the following, from the Pittsburg Dispatch, that any Canadian cannot help feeling its sting:

"Compared with the United States, Canada's civil service, notwithstanding the increases under the new amending Act, remains ill-paid. The maximum for deputy heads of departments is only \$4,000 a year, and for chief clerks of departments \$2,800 a year, far below the remuneration men of equal ability command on railroads, in the banks, insurance and financial concerns, and commercial houses.

"The officials are expected to live in a style which leaves no possible margin to the good. Men of large families lead a struggling existence to keep up social appearances, and die poor. The consequence is the service has ceased to attract the best material.

"Matters on the bench are even worse. The High Court judges in Ontario receive \$6,000 a year, and Federal Supreme Court judges, the highest in the land, only \$7,000 a year. The insufficiency of these salaries may be gathered by comparison with New South Wales, with a population of only 1,400,000, which pays ten puisne judges \$12,500 a year each; Victoria, population 1,200,000, pays \$15,000 to the High Court judges, and so in all the Australian colonies.

"The integrity of Canada's judges is traditional, but the salaries paid are below the earnings of first-class lawyers."

BRIBING OF EMPLOYEES A CRIME.

THE State Legislature of Massachusetts has passed an enactment that is designed to correct an abuse that is prevalent in many parts of Canada, as well as in that state. The object of the law is to put a stop to the bribing of employes in the selling of supplies. About a year ago Hardware and Metal drew attention to the prevalence of this form of commercial corruption, particularly as between the larger hardware supply houses and those who bought the supplies for the lake vessels. A Toronto dealer, it will be remembered, went so far as to say that in the majority of cases the dealer found it absolutely necessary to bribe those in authority to secure the orders for Lake Ontario vessels. Commissions were the rule. Sometimes these commissions were deducted from the average price; in other cases the price was advanced, making the vessel owner bear the expense of the commission charge by his employe, the officer who bought the supplies.

It is manifest, from statements made by large dealers, that this practice is as prevalent as ever. It is wrong in principle and bad in effect, and a law which should effectually prevent it would receive the hearty endorsement of the hardware trade.

The new Massachusetts law provides that whoever gives, offers or promises to an agent, employe or servant any gift or gratuity whatever with intent to influence his action in relation to his principal's, employer's or master's business, or any agent, employe or servant who receives or accepts a gift or gratuity or promise, under an agreement or with an understanding that he shall act in any particular manner in relation to his employer's business, shall be punished by a fine of not less than \$10 nor more than \$500, or imprisonment for not more than one year.

THE MINISTER SHOULD ACT

THOSE who have given serious thought to the work of the Supreme Court of Canada have reason to look to the Minister of Justice, Hon. Chas. Fitzpatrick, for action

which will rid Canada of the stigma of meanness and shortsightedness in its treatment of the bench.

It is the custom of the Dominion Government to leave such matters to the Minister in charge of the department directly affected. The present Minister of Justice is the type of man from whom one would expect broad-minded treatment of such an important subject. He has, moreover, evidenced that he has at heart the best interests of his department. There is, therefore, good reason to hope that he will place himself at the head of the movement to ensure the integrity and strength of the Supreme Court by more adequate remuneration for the judges. If he does, he can depend on the unanimous support of those who are the leaders in commerce, industry and the professions in Canada.

The trade journal ad that aims at nothing more than immediate orders interests that very small fraction of readers who are contemplating purchases. But the advertising built for general simplicity impresses every reader, and when purchases are made a year later, or five years later, the advertiser is still a factor to be reckoned with.—Mahin's Magazine.

and on the general approval of all classes in the Dominion, in a step which will give him recognition as a progressive Minister of the Crown.

BUSINESS MEN HONORED.

IN the honors which have been conferred on George A. Drummond and Hugh Montagu Allan, of Montreal, Canadian business men naturally take pride. It is doubtful if better representatives of Canadian commercial interests could have been selected for the King's honors. Both men have contributed of their wealth and their energies towards the extension of Canadian trade and the upbuilding of Canadian industries. In addition, they have been good citizens both of their home city and of Canada, en-

gaging in social, educational and philanthropic work, which will long cause their names to be held in honored remembrance.

Hardware and Metal voices the congratulations of the business interests of Canada in wishing long life and prosperity to the two new Knights.

THE ANNUAL HEATING NUMBER.

The annual Heating and Plumbing Number of Hardware and Metal, which is to be issued on July 23, is likely to be one of the most readable numbers we have ever sent out. In addition to the report of the convention of the National Master Plumbers' and Steamfitters' Association, which is to be held on July 20, 21 and 22, it will contain many valuable technical articles. We are also desirous of having for it everything that will be news to the heating or plumbing trades in Canada, and would welcome any information to that end from any of our readers.

ALIEN LABOR AT THE SAULT.

IN the development of a new industry in any country it has ever been and ever will be found necessary to secure for certain responsible work in connection therewith experts in the industry. In such cases it is always necessary to secure the services of aliens. Great Britain owes in large measure her industrial greatness to the far-sighted policy which brought into that country in former centuries the most highly trained mechanics that could be secured in continental Europe. So, when the Toronto Globe lends itself, as it did on Wednesday, to editorial support to an agitation to have the Sault works rid of American mechanics, it is taking a stand that is detrimental to the best interests of Canadian labor as well as Canadian capital.

PERSONAL MENTION.

Mrs. N. J. Holden, of Montreal, has returned from the convention of master car builders and master mechanics of all the railways of United States and Canada, held at Saratoga, N.Y. He reports that the exhibits of new appliances for locomotives were quite numerous and interesting. The meetings were largely attended, and the interest is increasing from year to year.

Mr. A. C. Jenking, manufacturers' agent, of Montreal, was in New York last week.

THE TARIFF AMENDMENTS.

ON Tuesday, Hon. W. S. Fielding, Minister of Finance, introduced before the Canadian Parliament several amendments to the tariff recently brought down. His announcement of the amendment was in part as below:

If the House will permit me, without a formal motion, I would avail myself of the opportunity of placing on the table of the House some changes which we desire to make in the tariff resolutions. I might, of course, simply have placed the amended resolution of the notice papers, but I thought the House would prefer that I should call attention to several points in regard to which the changes are to be made. In both respects the changes are in form rather than in substance, and do not affect the rates of duty, but there are one or two items of some importance, and I will ask the indulgence of the House for a brief space while I call attention to the facts, so that hon. gentlemen who may be interested particularly in any of these may understand them at once without having to wade through the resolutions.

NEW GAUGE ON METAL AND WIRE.

I desire to introduce into the resolutions a clause dealing with the gauge which determines the classification of metal plates and wire. Hitherto the Customs Department have used what is called Studd's gauge, and it is proposed to use what is known as the Imperial standard gauge, which, I am advised, is better adapted to the purposes of the department.

THE DUMPING CLAUSE.

In what is commonly called the dumping clause it is proposed to insert words which will empower the Minister of Customs in his regulations to make a temporary exemption as respects the operation of that clause in cases where the goods referred to are not manufactured in Canada in large quantities and in open competition. It would be possible that an article might be made in Canada to a very small extent, or it would perhaps be in the hands of some one producer and not open to the trade. It is felt that if such a condition should arise it might not be a proper case for the application of the dumping clause. The amendment will therefore provide that the Minister of Customs may, in his regulations, temporarily exempt from the operation of the special duty—that is

the technical phrase I use—for the dumping clause—articles of a class which the Minister is satisfied are not made in Canada in a substantially large quantity, and open to sale on even terms to all applicants. Though an article may be made in Canada ordinarily, exceptional circumstances may arise, such as a strike which, would stop the manufacture in Canada, and in that case the Minister of Customs ought to have some discretion to meet a condition which might arise. That is the object of the amendment.

In the resolution laid on the table reference is made to the computation of the duties as respects spirits in flasks and bottles. This is rather a matter of customs regulations than anything else, but that clause to which I refer is being enlarged in the amended resolution. It does not affect the rates of duty. In the duties on coal oil a change is made in the phraseology, but no change in the rates of duty.

WINDOW GLASS.

In the case of window glass we made provision in the resolutions as tabled that British window glass should be reduced to 7 1-2 per cent. We made no reduction in the duty on window glass from other countries. It has been represented to us that the British window glass trade is in the hands of a very few people indeed; that the export trade is practically in the hands of one concern, and that their methods of sale are such as to debar the general trade from that free competition which is desirable. It has been represented that in order to allow the trade in Canada reasonable opportunity to benefit by competition in their purchases we should make at the same time some reduction in the foreign glass. While retaining the duty of seven and a half per cent., as stated in the resolution, on British window glass, we propose, therefore, to reduce the duty on the foreign glass from 20 per cent. to 15 per cent. The net result will be that foreign window glass will stand at 15 per cent. and British window glass at seven and a half per cent. The proportion of the British preference will in that case be fifty per cent. hereafter, instead of thirty-three and one-third per cent., as in the tariff for some years past.

CLEARER DEFINITIONS.

There is another item which reads: "Tableware of porcelain, china or other clay." For the purpose of more clear-

ly defining it we insert the word "white," so that it will read "tableware of china, porcelain or other white clay." This will prevent confusing the item with some others, which was not intended.

There was a provision in the tariff of a year ago for the admission free of duty of machinery for the manufacture of sugar from beets. That provision has expired, and we propose to renew it for the term of another year up to April next.

We have placed on the free list the item of printing presses, and it has been deemed desirable that that should be more clearly defined. We propose that the item should read: "Printing presses, rotary." This will make it clear that other classes of printing presses which we did not contemplate should not be included in the item, and are not transferred to the free list.

THE DATE OF ENFORCEMENT.

There is one other matter which is of importance, and that is the date on which these various changes in the way of increased duties shall take effect. As a rule, under the practice in Canada, whenever the budget speech is delivered such changes of tariff as may be made take effect at once, and as the resolution now stands without any qualification that would be the result. However, there are precedents for taking a different course. Some years ago, for good reasons, no doubt, the operation of the new resolution was delayed for a period, and in the case of the German surtax we adopted the same policy. Following these precedents we now propose to provide that in the case of all goods actually ordered before the date of the budget—and confining it entirely to goods so actually ordered—if they be entered in Canada on or before the last day of August next they shall be admitted under the old rate of duty, and the new rate of duty shall only apply to cases in which the goods have not been ordered. The reason for this is that it has been represented that in some lines, notably woolen goods, large quantities were sold in advance at fixed prices on the basis of the existing duties. The goods in some cases were on their way, and the orders could not be cancelled. After very careful consideration we have come to the conclusion that no injury will be done the woolen industry, for which the benefit was intended, because the goods are ordered, and have to come in anyhow. The only question is whether we should exact a higher duty, and after full consideration we believe that in the case of all duties which have been increased by this resolution—this will apply to special duties as well as to the various items which are set forth—and where the goods have been actually ordered on or before the 7th day of June they shall come in at the old rate, provided they are entered in Canada on or before the last day of August.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street, Montreal.
Montreal, July 2, 1904.

NO great change has taken place in the hardware business since last week. If any, it is a little quieter, although business is still good, and a large amount of goods is being shipped. The last week of June is not looked upon as a promising one to the hardware men, but this year it is slightly better than the average. Owing to the lateness of trade opening in the Spring, the influence of the Summer holidays, which is usually exerted about this time, has hardly been felt. Haying is now in full swing, and a splendid outlook in this direction is not without its effects.

Several changes in price have taken place this week, although none is of a very large amount. The most important change lately is in rope, which, as noted last week, dropped a half cent a pound, contrary to all expectations. Wooden handles have advanced, more particularly in ash goods. In some lines on which the discount was formerly 50 per cent. it is now 45 per cent., and in other lines the discount has been reduced from 50 to 40 per cent. Disston saws are also higher, the discount of 12 1-2 per cent. being reduced to 10 per cent. There is also an increase in Winchester rifles, and a new catalogue is being made up. This is the expected result since the change in tariff, and it is safe to say there will be many more such changes in the next few weeks.

The former shortage in bolts and nuts is now caught up with, and bar iron is not as scarce this week as it was reported last. Some sizes of screws are still scarce. Inquiries are not nearly so numerous this week, but the outlook in the hardware trade is very bright, indeed.

Wooden Handles—There is a splendid demand for this line at the present time. A change in price is noted this week, being a slight advance, particularly in ash goods. In some cases the discount has been lowered from 50 to 40 per cent., and in others from 50 to 45. We quote maple and hickory handles of all kinds, discount 45 per cent.; ash hayfork handles, manure, spade and shovel handles and adze handles, discount 40 per cent.

Hay Scythes—Business is unusually brisk in hay scythes; and as was noted last week, repeat orders are coming in fast.

Grain Scythes—A few new orders have been received, and the prospects in this line are good.

Grass Hooks—The demand has been exceedingly good this week, being one of the best yet.

Scythe Stones—An active market. We quote: Red End, \$3.50 a dozen; Baie de Chaleur, \$4.50 a dozen; Aeme, \$6 a dozen.

Wood Rakes and Hay Rakes—There is a continued brisk demand for these goods. Prices are: Straight, \$1.35 to \$1.60 a dozen; bent, \$1.50 to \$1.80 a dozen.

Lawn Mowers—This has been a good season for lawn mowers, and the market is still active. We quote as follows: With 8 inch wheel, sizes 12, 14 and 16 inch, \$2.65 each; with 9 inch wheel, size 12, \$3; size 14, \$3.12 1-2; size 16, \$3.25 each; Philadelphia pattern, size 12, \$3.25; size 14, \$3.50; size 16, \$3.75 each; High Wheel, size 12, \$4; 14, \$4.25; 16, \$4.50; 18, \$4.75; 20, \$5.25 each.

Garden Hose—The same good demand for garden hose continues. Discounts continue: Trade, 75 per cent.; Western, 65 and 10 per cent.; white, 40 and 10 per cent.; maroon, 40 and 10 per cent.; cotton, 60 per cent.

Hose Reels—A fair business is being done. Prices, 15 to 25 per cent. higher than last year.

Lawn Sprinklers—Trade is normal in this line. Prices as before, \$2.50 to \$18 a dozen.

Ice Cream Freezers—The season opened up well, and there has been no dropping off of orders. We quote the following range of prices for the leading brands: One quart, \$1.50 to \$1.60 each; 2 quart, \$1.70 to \$1.80 each; 3 quart, \$1.95 to \$2.25 each; 4 quart, \$2.35 to \$2.60 each; 6 quart, \$2.95 to \$3.25 each; 8 quart, \$3.70 to \$4.10 each; 10 quart, \$4.75 to \$5.50 each; 12 quart, \$5.75 to \$6.50 each; 14 quart, \$6.75 to \$7.50 each.

Washing Machines—Less business is being done at present than formerly. We quote as follows: Round (three legs), \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Agricultural Wrenches—More business in this line was reported last week, which is still being maintained.

Harvest Tools—A big trade is being done. Discount as before, 60 per cent.

Hand Saws—The demand is fairly good. An increased price is noted this week. Former discount, 12 1-2 per cent.; now, 10 per cent.

Spring Hinges—Spring hinges are moving well. We quote as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—A dull market. Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10-inch sizes is \$4.25.

Wire Coat and Hat Hooks—Trade is fairly good. Prices continue 75c a gross for 3-inch.

Churns—There is hardly as good a demand as might be expected. Discounts, 40 and 15 per cent. f.o.b. Montreal, and 30 and 15 per cent. f.o.b. factory.

Green Wire Cloth—No unusual market, but a fair business. Price, \$1.50 for 100 square feet.

Poultry Netting—Demand keeps up well. Discounts for 2 inch 19 gauge standard extras are 60 and 5; for 2 inch 16 gauge the discounts are 55 and 5 per cent.

Annealed Hay Wire—A brisk trade in annealed hay wire is reported this week. Prices and discounts the same.

Galvanized Poultry Netting Staples—These are still selling well. Prices are: Sizes 5-8, 3-4, 1 1-8, 10 lb. boxes, \$12.50 list; 25 and 50 lb. boxes, \$12.25 list; 100 lb. boxes, \$12 list. Less 57 1-2 per cent.

Galvanized Wire—Not many orders reported. We quote as follows: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots 12 1-2c extra per 100 lbs. will be charged.

Rivets and Burrs—A moderate trade is being done. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

Tinned Roofing Caps—A steady fairly good market. Price, 6c a lb.

Screws—Trade is good. There is another slight shortage in some sizes. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—There is no change in price this week. Business good. We quote discounts as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 per cent., and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off.

Washers, 45 per cent. off.

Cut Nails—No unusual feature this week. The supply is good; prices remain the same, and the demand is steady. We quote as before, \$2.30 per keg, f.o.b. Montreal, Hamilton, Toronto and St. John.

Wire Nails—A big business still continues at the same prices. We quote the following prices: \$2.40 per keg carlots and \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Pressed Spikes—A fairly active market. Discount, 25 per cent.

Horseshoes—Business is brisk. Our quotations are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—No change this week. A steady business doing. We quote C brand 40, 10 and 7 1-2 per cent. off list; other brands, 55 per cent. off list.

Shot Guns and Rifles—The demand is good. Already an advance in the price of rifles is announced, and it is likely that shot guns will also be higher.

Ammunition—Last week's change still holds good, being an advance of from 12 to 15 per cent. We quote: Rim fire cartridges, 30 and 2 1-2 discount from list; centre fire, 5 per cent. advance on list.

Game Traps—These were also advanced in price last week. The former discount was 72 1-2 per cent., and the present discount is 70 per cent. off list.

Roofing Pitch—An active market is characteristic of this line. The demand keeps up well. Price continues \$1 per cwt.

Building Paper—An excellent trade is being done. We quote as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing,

40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Firebricks—It was expected that the market in firebricks would brighten before this, but as yet it has not.

Cement—The cement business is very backward this year, and has not yet reached a normal state. The prospects are good, as there is a good deal of work under consideration requiring a great deal. Prices remain unchanged at former quotations, which are: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex cars.

Cordage—The change noted last week still holds good. It was a lowering in price amounting to one-half a cent a pound on manila and sisal rope. This week's quotations are as follows: Pure manila, 14 1-2c; British pure manila, 12c; sisal, 11 1-2c; double lath yarn, 10c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

METALS.

Although the holidays, both this week and last, have interfered somewhat with business, a good trade is reported by most houses. There is a somewhat better feeling in pig iron, owing to the curtailed production in the United States, which is relieving the fears of extensive dumping. Import business in metals is fairly active.

Price changes are not numerous. The tin market is easier, but nominally there is no change in price. Concessions are obtainable on round lots. There is an upward tendency in copper, and prices quoted below are firmly maintained.

Pig Iron—A somewhat better feeling seems to pervade the pig iron market. Production in the United States is being rapidly curtailed, thus lessening the danger of extensive "dumping," although it does not entirely remove it. The rate of consumption is quite satisfactory, but there is little, if any, forward buying. Prices are nominally as before:

"Disc," No. 1.....	\$17.50 delivered Montreal.
"Dom." No. 1.....	18.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50 " "
Glangarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.00 " "
" (special).....	17.50 " "
Ayresome No. 1.....	17.50 " "
" No. 3.....	16.90 " "
Clarence No. 1.....	16.25 " "
" No. 3.....	16.00 " "

Bar Iron—Former prices are still quoted. Business is very active. We

quote: Merchants' bar, \$1.75; horse shoe iron, \$2; forged iron, \$1.95.

Merchant Steel—Business is of average volume. We quote: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.55; machinery (iron finish), \$2.45; square harrow, \$2.45.

Tool Steel—Nothing special to report. Fairly active business. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 9c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

Black Sheets—Steady at the decline noted in last issue. We quote: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Galvanized Iron—There is an active business passing, and in some quarters there is a disposition to go after trade, regardless of profits. Prices quoted are as follows: Queen's Head, 28 gauge, \$4.30; 26 gauge, \$4.05; 22 to 24 gauge, \$3.80; 16 to 20 gauge, \$3.70; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.30. "Windmill Best," 28 gauge, \$4. In less than case lots, 25c extra.

Canada Plates—We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized, \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Sheet Zinc—Market steady at former figures. Cask lots are selling at \$6.25 to \$6.50. Small quantities, \$6.50 to \$6.75.

Zinc Spelter—Quoted at 6c, subject to concessions for quantities.

Tinplates—Market firm. No change. Cokes, \$3.75 and charcoal, \$4.

Ingot Tin—Since last report there has been a further weakness in tin, followed by a recovery. At time of writing the tendency is downward, but nominally last week's quotations of 30 to 30 1-2c still hold. Concessions are obtainable for good orders.

Ingot Copper—The copper market continues firm, with an upward tendency, and last week's quotations of 13 1-2 to 13 3-4c are firmly maintained, the minimum price applying only to large quantities.

Pig Lead—Quoted at \$3.25 to \$3.35.

Coil Chain—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on carlots.

Scrap Metals and Old Materials—This market is very dull, as the big consumers are not buying, and the jobbing

houses are not disposed to offer high prices for goods which they will be forced to hold for a long time. The market is weak, and another decline is not unexpected. We quote: Heavy copper and wire, 10 to 10 1-2c per lb.; light copper, 9 to 9 1-2c; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 1-2c; light brass, 5c; lead, 2 3-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery, scrap, \$12 to \$13; stove-plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,
10 Front Street East,

Toronto, July 2, 1904.

A DECLINE of 1-2c in rope quotations is the only change reported in prices this week, though considerable interest is still manifested in the advance noted last week in some lines of American ammunition and handles. Quotations on barn door tracks and hangers are withdrawn. An excellent demand for all seasonable lines, especially for building supplies and harvesting tools, is reported. The extension of time for the importation of goods under the old tariff to August 31 has been a source of much satisfaction to many importers, who stood to lose materially by the sudden increase in the duties. The other changes, particularly that affecting window glass, are considered as an improvement over the original regulations.

Harvest Tools—The trade is calling freely for haying tools of all kinds, while a good sorting demand continues for other lines. The advance on handles is well maintained.

Sporting Goods—The advance made by some houses on American ammunition is firmly held. An increasing demand is reported.

Washing Machines—Business is moderate; prices steady, as follows: Round reacting washer, per dozen, \$56; square reacting washer, per dozen, \$59; Eclipse, \$48; Dowsell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Woodenware—A fair business is reported. Prices are now as follows: Tubs, No. 0, \$11.55; No. 1, \$9.35; No. 2, \$8.25; No. 3, \$7.15; pails No. 1, 2 hoops, \$1.93; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 6 dozen packages (12 to case), 95c.

Oil Stove Wick—Prices are steady since the recent advance of about 10 per cent.

Steel Track Door Hangers—Quotations have been withdrawn by some manufacturers, and lower prices will be quoted on receipt of specification. This action is the result of competition of American lines.

Chain—A good sorting business keeps up. Prices are as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85;

7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Lawn Mowers—Demand for this line now quiet. Prices are unchanged, as follows: Woodyatt, 10 1-2 inch wheel, \$8.50; Star, 9 inch, \$7; Daisy, 8 inch, \$5.75; Philadelphia, 7 1-2 inch, \$7; Ontario, 7 1-2 inch, \$15.80; King Edward, 12 inch, \$9.50 (14 inch cut in above). D. Maxwell & Sons, 10 1-2 inch, \$7.50 to \$10; 9 inch, \$5.50 to \$6.25; 8 inch, \$4.90 to \$5.50. Discount 50 per cent.

Screen Doors—A fair trade is doing in this line. We quote as follows: Common, two or three panel, walnut, 4 inch, \$6.50; yellow and green stained, \$6.75; in natural colors oil finish, \$8.75, with 20c less for 3-inch style.

Screen Wire Cloth—Prices steady at \$1.50 per 100 ft.

Spring Hinges—There is a fair demand. Prices steady, as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Barb Wire—Sorting trade is still good. Prices are steady. We quote as follows: \$2.75 per 100 lbs. f.o.b. Toronto and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—A fair trade continues at unchanged prices. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs. extra charged.

Coiled Spring Wire—Sorting orders are still coming in briskly. Prices are steady. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—A good business is reported, with prices still steady. Quotations are: \$2.45 per keg f.o.b. Toronto, with carlots \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Not much doing, with prices as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is still quiet. Prices are unchanged. We still quote discounts as follows: "C" brand, 40,

10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—An active demand continues. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Business keeps brisk in all sizes, at steady prices. We quote as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—Business has been fairly good since the discounts were increased. We now quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Cordage—A reduction of 1-2c is made in all lines of rope and lathvorn. Binder twine is unaltered, the business being practically completed. We quote: Sisal, 10 1-4c; standard, 10 1-4c; standard manila (550 ft.), 11 1-4c; manila (600 ft.), 12 1-4c; pure manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are unchanged as follows: Pure manila, 14 1-2c; British pure manila, 12c; sisal, 11 1-2c; double lathvorn, 10 1-2c; single lathvorn, 10c; double shingle-yarn, 10 1-2c; single shingle-yarn, 10c; sasheord, "Hereules," 32 to 35c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 25 to 28c; 4 ply, 32 to 34c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Firebrick—Trade has picked up considerably since last week, and the demand is still improving. The price of English and Scotch firebrick has risen from 28 to 30c to 30 to 35c. We quote: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade, 32 1-2 to 40c.

Building Paper—There is no special feature in the market this week. Business continues brisk at the following prices: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

Cement—There is nothing new in the cement market this week. Trade con-

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

BRAND

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Price to Sales Agents

Drummond McCall & Co.

MONTREAL, QUE.

or to

Canada Iron Furnace Co.

MIDLAND, ONT. Limited

We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C. F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

times brisk, with prices unchanged. We quote: Canadian Portland, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2, ex-store: American Portland, \$2.30 to \$2.40 f.o.b. Toronto.

METALS.

A fairly good business is doing in sheet metals, and in ingot copper and lead, but the inquiries for pig and bar iron are quite small.

Pig Iron—The market is somewhat improved, but is still far from firm. We quote:

Middlesboro, f.o.b., Toronto.....	\$19 25
Hamilton, No. 1 ".....	\$18 25 to 18 50
" No. 2 ".....	17 75 to 18 00
" No. 1, ".....	17 00 to 17 25
Midland, No. 1, ".....	18 50 to 19 00
" No. 2 ".....	18 00 to 18 50
" No. 1 f.o.b. Midland.....	17 00 to 17 25
Radnor, f.o.b. furnaces.....	30 00
Londonderry, f.o.b. furnaces.....	17 50 to 18 00

Bar Iron—Competition for business continues keen. Prices are somewhat weaker. We quote \$1.75 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—Prices are steady, with an excellent trade doing. Quotations are as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—Prices are somewhat easier, the range now being from 29 to 30c. An active business is doing.

Galvanized Sheets—There is a good demand at unchanged prices. Quotations are as follows: Queen's Head, \$1.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tinplates—Considerable business has been done. Stocks are light. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—A fair demand is reported. A large quantity is being discharged at Montreal for delivery throughout Ontario. Prices are steady. We quote as below: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Copper—The market in Great Britain shows much greater activity, and other markets are improved in consequence. Prices are easy, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

Brass—There is a fair trade, with the discount steady at 15 per cent.

Lead—There is a good demand at unchanged prices. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Sheet Zinc Sheet Copper

and other Metals.

From Stock or for Import.

A. C. LESLIE & CO.

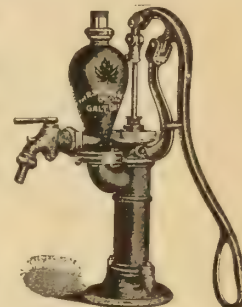
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The only reliable Pump for you to handle is

The McDougall Standard

It stands hard usage.
Lasts interminably.
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Outlasts several wooden pumps.
It's made in Canada.
Want our catalogue? It's free.



The
R. McDougall Co.
Limited
Galt, Ont.

"ALPHA" HIGH SPEED STEEL Crucible Cast Steel

for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

SHEFFIELD, ENG.

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BAINES & PECKOVER, Toronto

Agents for British Columbia:

E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of—

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

Zinc Spelter—Stocks are light. Buying is active at 5 3-4 to 6c per lb.

Solder—There is a fair trade. Prices are 1-2c lower. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Antimony—7 1-2 to 8c per lb.

PETROLEUM.

Trade continues to be brisk, with prices unchanged. We make the following quotations: Canadian water white, 18c; Canadian prime white, 16 1-2; American water white, 19c, ex-warehouse.

Old Material—Business still continues dull in the market, with no advance in prices. During the week under review the price of lead slumped 5c per cwt., and that of scrap zinc 1-2c per lb. Otherwise, the market remains unchanged. Stock is offered very freely. We quote: Heavy copper and wire, 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 9 1-4c per lb.; heavy yellow brass, 8 to 9c per lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.45 per cwt.; scrap zinc, 2 1-2c per lb.; iron, No. 1 wrought, \$8 to \$9; No. 2 wrought, \$3; machinery cast scrap, \$12; stoveplate, \$9; malleable and steel, \$4; old rubbers, 4 1-2c per lb.; country mixed rags, 70c per 100 lbs.

Hides, Skins and Wool.

Hides are still very scarce, while wool is coming in freely. All grades of veal skins have dropped 1c per lb. We quote the following:

HIDES.

No. 1 green, per lb.	0 08
" 2 " " "	0 07
" 1 " steers, per lb.	0 08 1/2
" 2 " " "	0 07 1/2
Cured, per lb.	0 08 1/2

CALFSKINS.

Veal skins, No. 1, 6 to 12 lb. inclusive	0 10
" " " 2 " "	0 08
" " " 1 15 to 20 lb " "	0 09
" " " 2 " "	0 07
Deacons (dairies), each	0 65
Sheep skins	1 25
Lamb skins	0 35

WOOL.

Unwashed wool, per lb.	0 10
Fleece wool, new clip, per lb.	0 17
Pulled wool, super, per lb.	0 18 0 20 1/2
extra	0 20 0 22

AN ARRANGEMENT OF LIGHTS.

A grocery in Chicago has hit upon something new in the way of window lighting. The windows are wide and deep, but have no background. The goods are arranged on the floor in conventional designs, and some of them are built up into cones and pyramids about two or three feet high. Interspersed among the goods are many miniature electric lights. The lamps are in many colors, and are frosted glass and all of the other lights in the store are turned off, leaving the display alone lighted.

The effect is novel and attractive for the display is accentuated by the surrounding darkness and the subdued, many colored lights produce a pleasant change from the brilliant glare of neighboring windows.

THE BANNER
COLD BLAST

LANTERN

—NOTE IMPROVEMENTS FOR SEASON 1904.—

We make twelve different Styles of Lanterns in Tin, Antique Copper and Solid Brass.

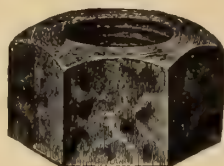
STANDARD LIGHT PRODUCERS.

FOR SALE BY ALL PROMINENT JOBBERS THROUGHOUT THE DOMINION.

ONTARIO LANTERN & LAMP CO., LIMITED

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HAMILTON, ONT.



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of
Set and Cap Screws, Special Milled Work, Engine Studs,
Etc. Cold Punched Nuts of every variety of finish.

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DO IT NOW

MANUFACTURERS WISHING TO BE
REPRESENTED IN

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COMMUNICATE WITH

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MADE FROM BORACIC STEEL
FULLY WARRANTED.



Send for Green
Book of Hard-
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SMITH & HEMENWAY CO.,

Mfrs. of Cutlery and Hardware Specialties.

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Canadian Sample Room: 215 Coristine Bldg. MONTREAL, ALLEN C. JENKING, Canadian Manager.

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Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

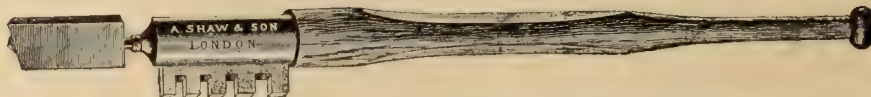
Established 181

ALSO
Lead Vices,
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Agents for Canada: A. Ramsay & Son, Montreal

GLAZIERS' DIAMONDS



Our diamonds were first on the market and still remain first with up-to-date improvements. We claim for them **Superiority over All Others in Quality and Workmanship.**

Glaziers' Diamonds of every description, for all purposes, supplied.

Established 1815

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UNITED STATES METAL MARKETS

The New York Journal of Commerce, July 1.

Pig Iron—Consumers of pig iron continue to buy only small quantities to meet current requirements. This policy, which has been exercised for the last six weeks, has proved advantageous to melters, and they are disposed to continue business in this manner. Southern producers, however, find an increasing number of small buyers to take up a fair tonnage of foundry grades, and within the last day or two have been holding a little more firmly, especially as it is now certain that many furnaces in the south will be banked, as no agreement has been reached concerning the miners' wage scale, which expired yesterday by limitation. Miners probably will suspend work to-day, and apparently little effort will be made to adjust differences for some time: at least until the market for iron shows a decided change for the better.

A number of contracts for southern iron have been taken tentatively on the basis of \$9 for No. 2 for forward delivery, but it seems probable that the furnaces will refuse to accept the orders on this basis.

Consumers, too, are meeting with labor difficulties which seem to indicate further contraction in the melting of iron. The National Founders' Association and the National Molders' Union of North America, who have been in conference at Pittsburg for two days, have disagreed. The molders' and core-makers' scale expired yesterday, and it seems probable that little effort will be made to adjust differences at the present time. While the trouble is apparently local at present, it is expected to become national.

There were several inquiries for coke foundry iron in the local market yesterday in lots of from 100 to 300 tons; also an inquiry for 300 or 400 tons of charcoal iron, and sales of several tons of Virginia foundry at \$11.50 at the furnace for No. 2.

Reports from Pittsburg are that sales of basis iron have been made as low as \$11.50 in the Mahoning and Chenango Valleys, or \$12.25 Pittsburg. This is the lowest price that has been reported since the depression of last Winter. No large sales of Bessemer iron are reported, nor is there any inquiry of moment. Under the circumstances there will doubtless be further contraction in both the melting and production of all grades of pig iron.

Bar Iron—The few orders for iron bars find mills ready to make concessions for immediate specifications, but with the closing down of a number of plants for repairs buyers will probably find difficulty in placing important contracts. The small business continues to be taken on the basis of \$1.30 to \$1.35 Pittsburg, equivalent to \$1.44 1-2 to \$1.49 1-2 tidewater. The light jobbing demand is met at \$1.75 base full extras from store.

Coke—Ovens continue to suffer from the banking of furnaces and the light melting of iron by manufacturers and low prices are made to move accumulated stock. For 72-hour Connellsville foundry coke \$1.75 to \$1.85 is asked, and a few sales are made at \$1.90 to \$2 at the ovens. Furnace coke is slow at \$1.25 to \$1.50 at the ovens.

Copper—The most significant feature of the copper situation is the demand for September on domestic and export account alike. This early buying of September copper is as surprising as it is unusual, following so closely upon the heels of heavy transactions for July and August delivery. It has been known for some weeks that June exports would be between 15,000 and 16,000 tons, and it is also known that July shipments will probably exceed even the June outgo, while the buying of the last two weeks makes it evident that the August outgo to Europe will fall but little short of the July quota, and now the awakening of September deals indicates that the movement is likely to continue into the Fall. It is evident that producers would shade prices slightly to keep the metal moving; Lake copper selling at 12.65c to 12 3-4c, electrolytic at 12.55c to 12.65c and casting grades at 12 1-2c to 12 1-2c.

Tin—The slightly firmer tone developed in the London market for tin was attributed to the belief that American consumption is likely to increase during the next few months, but whether this is founded on false premises, is too hazardous to base an opinion. The relatively low prices now prevailing should certainly stimulate buying, but consumers of tin are obliged to anticipate future conditions. There was a better inquiry in the open market yesterday for small lots, but holders were less disposed to sell except on an advance of from 5 to 10 points, spot tin being quotable at 25.80c to 25.85c, July at 25.85c and August and September at 25 3-4c, for shipment of tin from London within



**THIS SHOWS THE
"HALITUS"**

**THE FINEST VENTILATOR OR CHIMNEY
COWL MADE.**

It gives a **positive upward draft** under all conditions - can't get out of order - and exhausts more cubic feet of air per minute than any other ventilator.
Made of Galvanized Steel or Sheet Copper.

The perfect simplicity and clever mechanical arrangement of the "HALITUS" will delight you, if you want a ventilator that really and perpetually ventilates.
Read all about them in our catalog.

**METALLIC ROOFING CO.,
Limited,
Wholesale Manufacturers,
TORONTO, CANADA.**

30 days, the limits figured out about 25.90c c. i. f. New York.

UNITED STATES EXPORTS OF STEEL GOODS.

THERE is little variation in the significance of the monthly summaries of foreign trade in recent months, and special interest is only to be found in certain features. The full statistics for May and for eleven months of the fiscal year show again the declining tendency in both imports and exports, and an increase in the proportion of manufactured articles among the exports. Although there was a decline in the total exports for the month, there was a moderate increase for the eleven months, which is much more than accounted for by the high price of cotton. An increase in the value of manufactured exports, and in the proportion they bear to the total, is always regarded with satisfaction; but this has to be somewhat qualified when the details are considered. For the month of May, as compared with the same month last year, we find that articles classed as domestic manufactures increased from \$34,798,331 to \$38,894,561, and from 35.33 to 44.48 per cent. of the total exports. For the eleven months the increase was from \$373,907,325 to \$410,536,478, or from 28.77 to 30.44 per cent. The difference between the percentage for the month and the eleven months shows how the tendency increased toward the end of the period. There

was then a decided falling off in the export of natural products, as well as an increase in those classed as manufactures. We have often called attention to the prominence of copper, mostly ingots, which are practically a raw material, and of refined mineral oil in our statistics of manufactured exports. Of the gain of over \$36,500,000 for the eleven months, considerably more than \$24,500,000 appears in these two items. There are comparatively small gains in other items, but in cotton cloths there is a heavy loss.

But the feature of greatest interest just now is to be found in the exports of iron and steel, because it is notorious that production for a year past has been very light, and the domestic markets extremely dull. Our imports of iron and steel and of their manufactures for eleven months ending with May were valued at \$24,998,010, compared with \$47,012,535 the year before, a reduction of nearly one-half. At the same time the exports increased from \$88,169,525 to \$100,098,041, an advance of \$12,098,041, the gain for the single month of May being from \$8,330,063 last year to \$11,159,712 this. What makes this of special interest is that it denotes such a great falling off in home consumption and accompanies such a heavy diminution in production. Under it also lies the influence of the maintenance of high prices at home, while prices are largely reduced in the foreign markets.

In a letter from Pittsburg, published on the unsatisfactory condition of the iron and steel industry, it was said that the best informed authorities there attributed the present dullness, first, to the refusal of railroads to buy rails and other articles of iron and steel, except what they actually need; and, second, to the refusal of buyers to carry stocks, "believing the prices are too high and are bound to reach a lower level." During the fiscal year just over there have been fluctuations in the prices of pig iron and of steel billets, which lie at the bottom of the manufacturing processes, but there have been strenuous efforts to keep up those of the manufactured products, and the making of rails is so nearly a monopoly that there has been no reduction from \$28 a ton. In this very item of steel rails is the most notable increase in exports. Last year in May little more than \$40,000 worth were sent abroad, and this year the amount exceeded \$1,000,000. For the eleven months ending May this year the exports were about \$3,000,000, against \$675,000 last year. These rails have been sold to foreigners at about \$20 a ton, and in some cases less, while our railroads have been refusing to buy because they were charged \$28. A shipbuilder who testified before the Mercantile Marine Commission at Cleveland declared that steel for shipbuilding, which cost American buyers \$32 a ton at Pittsburg, was delivered at Belfast for \$24. There is not

much satisfaction in an increase of exports that arises from such a discrimination against our own consumers, nor much encouragement for helping shipbuilding which is thus burdened by our own monopolies.—New York Journal of Commerce.

MANUFACTURERS ON THE TARIFF

REGARDING the new tariff laws, the Canadian Manufacturers' Association have issued the following statement:

The Canadian Manufacturers' Association commends the general tendency of the recent tariff changes announced by the Minister of Finance, inasmuch as they provide increased protection for certain Canadian industries.

The association, while pleased that the Government has favorably considered the necessities of the woolen and twine industries, does not consider the measure of protection granted as sufficient and does not approve of the departure made by the Government in increasing the protection by decreasing the preference. Such action will probably be misinterpreted in Great Britain, whereas an increase in the regular duties on these lines would still have maintained the principle of a uniform preference for British goods.

The association, while gratified to note that the evil of "dumping" has been recognized by the Government, is of the opinion that it cannot be effectually remedied except by increased duties in necessary cases.

DIFFICULTIES IN THE WAY.

This conclusion is reached because of certain difficulties presented by the new regulations, as follows:

1. The difficulty presents itself at each of the five hundred ports of entry in Canada of a knowledge of what goods are made in the Dominion, this knowledge being necessary in order to determine the application of this clause.

2. While a sufficiently high tariff would minimize the evils of "dumping," the new regulation still leaves room for evasion of the laws and the slaughtering of foreign goods upon the Canadian market through rebates, commissions and similar methods.

DECLARATION WITH INVOICE.

3. The association is of the opinion that if this regulation is to be operated with any chance of success, the exporters in foreign countries who send goods to Canada should be required to accompany each invoice of such exports with a declaration stating not only that the prices named in the invoice are the ordinary credit prices

in the manufacturer's market, but that no arrangement for rebate, reduction or compensation has been or is being made with the importing firm either directly or indirectly.

4. If the new clause is to be operated effectively, a large and competent staff of experts is immediately rendered necessary.

The association still has the earnest conviction that "the changed conditions which now obtain in Canada demand the immediate and thorough revision of the tariff upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries.

TARIFF COMMISSION NEEDED.

The association welcomes the announcement that a tariff commission will be appointed by the Government in the near future, and takes this opportunity of expressing the hope that such commission will be of the nature recommended by the association in the resolution passed at the annual meeting in 1903, as follows: "That we recommend that the Dominion Government establish in Canada a permanent tariff commission of experts, who, under the direction of the Dominion Government, shall have constant supervision of the Canadian tariff with a view of making such recommendation to the Government as will best conserve and advance the interests of the Dominion."

In the opinion of the association the present conditions demand immediate action by the appointment of a competent commission of the nature outlined.



SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Steel Tow Boat and Tender," will be received at this office until Thursday, July 14, 1904, inclusively, for the construction of a Steel Tow Boat and Tender for the Fraser River, B.C., according to a plan and a specification to be seen at the Offices of Chs. Desjardins, Esq., Clerk of Works, Post Office, Montreal; Ph. Beland, Esq., Clerk of Works, Post Office, Quebec; H. A. Gray, Esq., Resident Engineer, Confederation Life Building, Toronto; at the Post Offices of Victoria and Vancouver, B.C., and at the Department of Public Works, Ottawa.

Tenders will not be considered unless made on the printed form supplied, and signed with the actual signatures of tenderers.

An accepted cheque on a chartered bank, payable to the order of the Minister of Public Works, for three thousand five hundred dollars (\$3,500.00), must accompany each tender. The cheque will be forfeited if the party tendering decline the contract or fail to complete the work contracted for, and will be returned in case of non-acceptance of tender.

The Department does not bind itself to accept the lowest or any tender.

By order,

FRED GELINAS,

Secretary.

Department of Public Works,

Ottawa, June 14, 1904.

Newspapers inserting this advertisement without authority from the Department will not be paid for it.

Window and Interior Displays

Timely Hints
and Suggestions

Arranging the Window Display.

NO more encouraging thing can be said of window dressing in small hardware stores than the fact that the most attractive and best paying windows are the simple ones, writes Giles Hunter in the Iron Age. One hundred dollars' worth of goods crowded into a window with expensive fixtures will be forgotten by the passing public much sooner than they will forget a large doll dressed like a boy, with cap and mittens, carrying a "shinny" stick and wearing a pair of wooden skates, painted to resemble steel, and whittled out by your clerk, because the factories make none small enough, and standing on a piece of mirror, surrounded by cotton batting, on which are displayed different styles of skates.

Shelving on the side wall of the window is not so good as poultry netting stretched over the wall and extending to the ceiling, on which to hang granite and enamel ware. This arrangement neither catches the dust or takes up the room that shelving does, besides fewer goods are required to give the wall a well filled appearance. A shipping tag pasted to the back of a granite dish makes a good hanger. Hooks placed on the side wall of the windows, on which to hang carpet sweepers or saws or steel goods at different times, make a good appearance without waste of room.

A rug for the bottom of the window is better for showing stoves, refrigerators, etc., than is either carpet or oil-cloth. A piece of plain, black cloth of good quality and without seam makes a good surface on which to display cutlery, tools and bright goods of any kind. It is well to have three or four different colored coverings for this purpose, for they have much to do with the success of your window. Five to ten dollars invested in a mirror, with a very narrow frame of your own making, to set at the back of the window when tools or other small goods are arranged on the flat surface of the cloth, is a good investment.

By confining each display to one line of goods and not overcrowding, it will not be a serious task to clean and change once a week, or once in two weeks, at most. No matter how well any particular effort pleases the public, don't let it stand more than two weeks, for by that time the glass will need cleaning on the inside, regardless of how many times you have cleaned it on the outside, and no soiled window can be a good window.

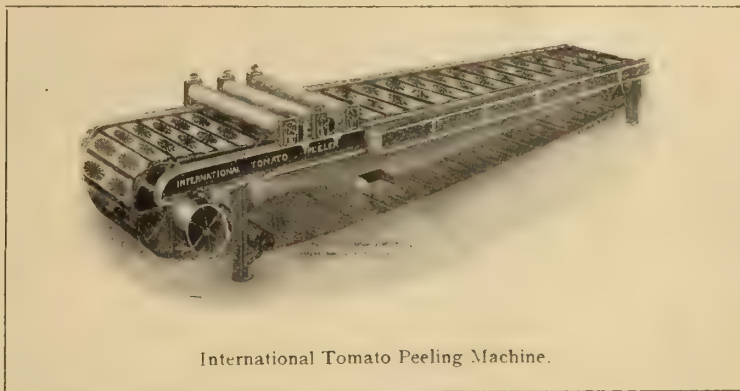
After a variety of experiments with artificial lights for windows, we are the best pleased with one large arc light, hung in the doorway, outside of the door, and no higher than necessary to clear the tallest man with the tallest hat. The sidewalk is then well lighted, you are a "shining mark" for a

TOMATO PEELING MACHINE.

A SHORT time ago an employe of the Standard Canning Co., of Hamilton, of which Lumsden Bros., wholesale grocers, are the principal owners, devised a machine for peeling tomatoes, an operation which has heretofore been performed entirely by hand. The machine was patented and the Standard Tomato Machine Co., of Hamilton, formed to place it on the market.

Through the courtesy of Mr. Lumsden, Hardware and Metal is enabled to publish the accompanying cut, which gives a very fair idea of the principle of the machine.

The tomatoes are placed on the revolving platform over the disks shown



International Tomato Peeling Machine.

block away, and if the glass is clean there is no brighter front on the street. There should be one or more arc lights inside the store to complete the effect, and they should be lighted whether the store is open evenings or not.

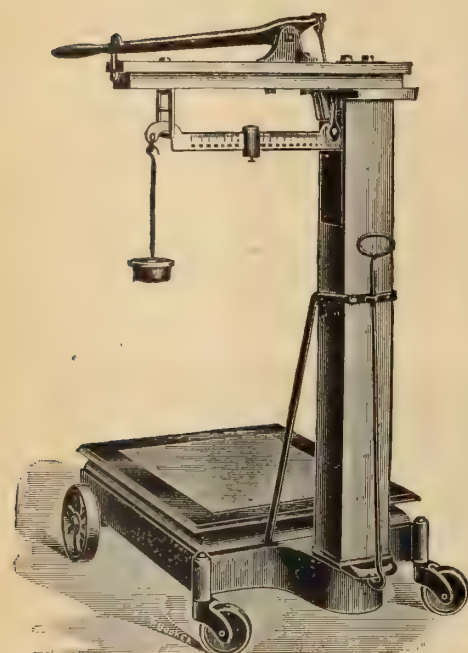
Holidays and special events furnish good suggestions for window dressing, such as stuffed turkey, surrounded by roasting pans, at Thanksgiving time. Or get a turkey skeleton from your hotel, wire and glue it into shape, and show on a platter, which is the centre of a circle of carvers, with a card calling attention to the kind of work your carvers will do.

thereon, and are pressed through by the grooved rollers shown in the foreground. The skin is at the same time removed and cut off by a knife.

Two machines, it is claimed, will take the place of 80 women, and will do the work much more rapidly and neatly than is possible under the old system. Six operators, with one machine, are enabled to peel from 600 to 900 bushels per day of 10 hours. The saving in wages can be easily calculated.

The machines can be inspected at the company's works at Hamilton, and are manufactured to order.

The Burrow, Stewart & Milne Co.'s "Champion Jewel" Scales



FITTED WITH SWIVEL CASTERS.

Can be turned without lifting in their own length, even when heavily weighted.

Far Superior to any Truck or Wagon scale (the weighing results of some of which are little better than a guess).

Thoroughly reliable and accurate.

WRITE FOR PRICES AND DETAILS.

MERRICK, ANDERSON & CO.

NORTHWEST DISTRIBUTORS,
WINNIPEG.

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL

Room 308 McIntyre Block,

Winnipeg, June 28, 1904.

SPLENDID growing weather has been experienced throughout the Northwest for the past week, and the most brilliant reports are coming in from various points pertaining to the conditions of the grain situation. The market is fairly steady, and the trade continues good.

Barbed wire, 100 lb.....	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91

Annealed wires (uncoiled) 100c. less.

Horsenails, 40 per cent. discount.

Horseshoes, iron, No. 0 to No. 1.....\$4 75

No. 2 and larger.....4 45

Snow shoes, No. 0 to No. 1.....4 60

No. 2 and larger.....4 45

Steel, No. 0 to No. 1.....4 45

No. 2 and larger.....4 20

Cut Nails—

2d 1 in.....\$4 10	1 in.....4 15
3d Fin. 1½ in.....4 10	1½ in.....4 10
3d 1½ in.....3 75	1¾ in.....3 70
4d 1½ in.....3 50	1½ in.....3 50
5d 1½ in.....3 50	1¾ in.....3 50
6d 2 in.....3 40	2 in.....3 40
8d 2½ in.....3 25	2½ in.....3 25
10d 3 in.....3 20	3 in.....3 20
20d 4 in.....3 15	3½ in.....3 15
30d 4½ in.....3 10	4 in.....3 10
40d 5 in.....3 10	4½ in.....3 10
50d 5½ in.....3 10	5 in.....3 10
60d 6 in.....3 10	5½ in.....3 10
	6 in.....3 10

Wire Nails—

1 in.....4 15	1 in.....4 15
1½ in.....4 10	1½ in.....4 10
1¾ in.....3 70	1¾ in.....3 70
2 in.....3 50	2 in.....3 50
2½ in.....3 50	2½ in.....3 50
3 in.....3 40	3 in.....3 40
3½ in.....3 25	3½ in.....3 25
4 in.....3 20	4 in.....3 20
4½ in.....3 15	4½ in.....3 15
5 in.....3 10	5 in.....3 10
5½ in.....3 10	5½ in.....3 10
6 in.....3 10	6 in.....3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00

Sheet iron, black, 10 to 16 gauge, 100 lb.....	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10

Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10½ oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28.....	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	

Genuine Russian, per lb.....	11
Imitation.....	07 to 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05

Tinplate, 1C charcoal, 20 x 28, box.....	9 50
" IX.....	11 50
" IXX.....	13 50

Ingot tin.....	3 50
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 15
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50

Pig lead, 100 lb.....	5 50
Black iron pipe, ¾ inch.....	2 55
" ¾ ".....	2 55
" ¾ ".....	2 80
" ¾ ".....	3 25

Black iron pipe, ¾ inch.....	4 20
" 1 ".....	5 85
" 1½ ".....	8 20
" 1¾ ".....	10 00
" 2 ".....	14 00

Rope, sisal, 7-16 and larger, basis.....	11 75
Manila, 7-16 and larger, basis.....	15 25
Lathyrarn.....	11 25
Solder.....	20
Axes, chopping.....\$ 6 75 to 12 00	
" double bitts.....	12 00 to 18 00
Bluestone.....	5 25

Screws, flat head, iron, bright.....85 and 10 p.c.	
Round " ".....	80 p.c.
Flat " brass.....75 and 10 p.c.	
Round " ".....70 and 10 p.c.	
Coach.....	70 p.c.

Bolts, carriage, ¾ or smaller.....60 and 5 p.c.	
" 7-16 and up.....	55 p.c.
Bolts, machine, ¾ and under.....55 and 5 p.c.	
" 7-16 and over.....	55 p.c.

Bolts, tire.....60 and 5 p.c.	
Bolt ends.....55 and 5 p.c.	
Sleigh shoe bolts.....70 p.c.	
Machine screws.....70 p.c.	
Plough bolts.....55 and 5 p.c.	
Square nuts, case lots.....3c. discount.	
small lots.....2½c.	
Hex " case lots.....3c.	
smaller lots.....2½c.	

Rivets, iron.....50 and 10 p.c.	
Copper, No. 8.....	32
No. 12.....	36

Coil chain, 3-16 inch.....9½	
" ¼ inch.....7½	
" 5-16 inch.....5½	
" ¾ inch.....5½	
" 7-16 inch.....4½	
" ¾ inch.....4½	
" ¾ and ¾ inch.....4	

Spades and shovels.....40 and 5 p.c.	
Harvest tools.....	60 p.c.

Axe handles, turned, s. g. hickory, doz..	\$3 15
No. 1.....	1 90
No. 2.....	1 60
Octagon extra.....	2 30
No. 1.....	1 60

Files common.....70 and 10 p.c.	
Diamond.....	60 p.c.

Building paper :

Anchor, plain.....	65c.
" tarred.....	70c.
Pure fibre, plain.....	67½c.
" tarred.....	80c.

Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
American R.F.....	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.

Loaded shells :

Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge.....	18 00
chilled, 10 gauge.....	19 00

Shot, Ordinary, per 100 lb.....	6 00
Chilled.....	6 55
Powder, F.F., keg.....	4 70
F.F.G.....	5 00

Tinware, pressed, retinned.....70 and 10 p.c.	
" plain.....75 and 2½ p.c.	
" pieced.....	
Japanned ware.....	37½ p.c.

Enamelled ware, white.....	45 p.c.
" Famous.....	50 and 10 p.c.
" Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American	27 1/2 c.
Prime white American.....	25 1/2 c.
Water white Canadian.....	25 1/2 c.
Prime white Canadian.....	24 1/2 c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap.....	5
Copper (heavy).....	8 1/2 c. per lb.
Yellow brass (heavy).....	7 1/2 c. "
Light brass.....	5c. to 6c. "
Lead pipe, or tea lead.....	2c. to 2 1/2 c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead.....	\$6 00 to \$6 50
Putty in bladder, 2 1/2 lb., in keg of 100 lbs.	0 02 1/2
Turpentine, pure, in barrels.....	\$ 0 97
Less than barrel lots.....	1 02
Linseed oil, raw.....	0 52
Boiled	0 55

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine....	0 29
" " extra engine.....	0 27
" " dynamo	0 35
" " black	0 22
" " cylinder.....	\$0 50 to 0 75
(as to quality)	
Harness oil.....	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00 1/2
" " 2nd pressure.....	1 09 1/2

A POOR EXHIBIT OF CANADIAN GOODS.

Canada is must unfortunate in the samples of her products which are frequently shown abroad. A correspondent writes us that at a recent furniture show in London, Eng., the goods shown by the Canadian Furniture Manufacturers' Association were a bad advertisement for Canadian furniture. The exhibit was made up, he says, of cheap goods.

Canadians can make and are making as good furniture as can be got anywhere in the world, but none of that was shown. Visitors sneered at the Canadian exhibit, and it left a bad impression on English buyers. It happened, however, that there was a lot of good Canadian furniture there but, as is frequently the case, it was shown as American.

GILLETT VS. LUMSDEN.

IN the Court of Appeal, Toronto, on June 29, before Moss, C.J.O.; Osler, MacLennan, Garrow, J.J.A.; Teetzel, J., the following decision was rendered, as reported in the Mail and Empire:

"Gillett v. Lumsden.—Judgment (E. B.B.) on appeal by plaintiff from judgment of a Divisional Court (6 O. L.R., 66, 2 O.W.R., 497), reversing judgment of Street, J. (4 O.L.R., 300; 1 O.W.R., 488), and dismissing the ac-

tion, which was brought to restrain defendants from infringing plaintiff's trade mark and trade name. "Gillett's Cream Dry Hop Yeast," by selling yeast cakes under the name of "Jersey Cream Yeast." The Divisional Court held that the evidence did not show a case of pass-

ing off. Held, that the view of the Divisional Court was right, and per Moss, C.J.O., that there was no infringement. Appeal dismissed with costs. J. Bicknell, K.C., and A. Bicknell, for appellant; G. F. Shepley, K. C., and F. C. Cooke, for defendants."

MONTREAL STEEL WORKS, LIMITED.

SUCCESSORS TO

The Canada Switch and Spring Co., Limited.

Manufacturers of

STEEL CASTINGS

OPEN)
HEARTH
SYSTEM.

SPRINGS, FROGS, SWITCHES, SIGNALS, for Steam and Electric Railways.

CANAL BANK, POINT ST. CHARLES,

MONTREAL.

BLACK JACK

TRY A
3 DOZ. CASE



ASK YOUR
JOBBER FOR IT

A BIG WINNER

SELLS ON SIGHT

MADE WITH
MANITOBA
PURE LINSEED
OIL

The Greatest Seller
in the Paint Line

MANUFACTURED BY
G. F. STEPHENS & CO., LIMITED
170, 172, 174, 176 Market Street, WINNIPEG, CANADA.

Write us for new prices.

PAINT, OIL AND BRUSH TRADES

THE "DUMPING" OF DRY COLORS.

A PROMINENT Montreal color and varnish manufacturer, in conversation with Hardware and Metal on Tuesday, expressed the opinion that while the new "dumping" clause might conceivably be effective in some lines of goods, it would be of little or no use in preventing the importation of colors and varnishes at slaughter prices. "There are very few color men who can tell the grade of a dry color, and I am quite sure that the ordinary appraiser in the customs office will have his troubles. There is a big range of prices in dry colors, as there are many differences in grade, and any price within the limits will be very apt to be accepted as correct. I don't think it is possible to prevent dumping of colors by any such measures. The only protection we can get is from a high duty, and in order to be effective, that duty should be specific, not ad valorem."

In appraising varnishes also, the customs officer will have his difficulties. I once had a man in my employ who could tell the different grades of varnishes without any trouble. He would place a small quantity on a piece of glass, and merely by smell he could tell at once what its quality was. But such an expert is hard to find, and the ordinary customs officer, no matter how careful and conscientious he may be in the performance of his duties, will be forced to accept the valuation of the varnishes made by the parties interested. No, I don't think the "dumping" clause will help us in the slightest.

How to Bore Holes in Plate Glass.

It is often desirable to bore a hole through plate glass to be used as a shelf or for some other purpose in the store, says an exchange. This has often seemed impossible to the trimmer or merchant in the smaller towns where there is no one especially prepared to do this work. Here is a simple and easy way to do it.

Get a small three-cornered file and grind the points from one corner and

bias from the other and set the file in a common brace for boring wood. Lay the glass you wish the holes bored in on a smooth surface covered with a blanket, and start the hole. You will soon make a slight impression on the glass.

Around this place a disk of putty, fill this with water. This will prevent too great heating from the friction. Resume the boring and in a few seconds you will have as clean a hole as though you were boring in wood. Use a little care and don't apply too much pressure while you are boring, as you are liable to crack the glass. Any size holes may be made in this way.

Selling Out Glass.

Owing to the recent tariff changes which have so injuriously affected the

importers of Belgian glass, P. D. Dods & Co., Montreal, have decided to sell out their entire stock, and an interesting announcement will be found in our advertising columns.

RIVAL TELEPHONE CO.

A CABLE despatch from London, England, states that C. Bromfield, London, - promoter, representing \$15,000,000 of British capital, has sailed for Canada to invest in Canadian electrical railways. Two telephone companies have made application to the Board of Civic Control, of the City of Toronto, for permission to instal a telephone system in the city, to compete with the Bell Telephone. The Bell interests have offered to enter into a five years' agreement, and to give some concession. The board decided to call for orders for competitive telephone system.



What Should a Good Paint Be?

One season handling Hollywood brand will convince you that it is what it should be—

**GOOD PAINT TO COVER
GOOD PAINT TO WEAR
GOOD PAINT TO SELL**



What more do you want? Hollywood Paste, Ready-Mixed and Floor Paints wear on the job, not off it.

The Imperial Varnish & Color Co.
LIMITED,
TORONTO, ONTARIO, CANADA.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street.

THE ACKNOWLEDGED
STANDARD**SOLARINE**

High-grade Liquid Metal Polish. White and black forms. Both are unsurpassed. Start it in your town. It brings the business. For prices, etc., address

SOLARINE DEPOT, TORONTO.

Do you use a

**Roller
Awning?**

If not, why not? We make the best roller awning in Canada. We can operate a 60-foot awning on one roller from one end easily and safely. Write or call for particulars. The best is none too good for you.

**WM. BARTLETT & SON**

Tents, Awnings and Flags

16 Adelaide St. West,

TORONTO.

McCaskill, Dougall & Co.**Manufacturers**

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH-GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.**Get your GLUES from****The GROVE CHEMICAL CO., Limited,**

Appley Bridge, Lancs., England.

Our ordinary grades are better than ordinary, and we can supply special makes for special purposes. SCOTCH GLUES, BOX GLUES, COLOGNE GLUES for Paper Makers. SIZE of all kinds. Send your name for our printed matter.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO

MONTREAL

LONDON

OTTAWA

WINNIPEG.

Glass at Slaughter Prices

Owing to the recent tariff changes we have decided to sell out our entire stock of glass, and in order to do so we are offering it at a big reduction. It is throwing money away. If you want your share write us for our prices.

P. D. DODS & CO., Montreal, Toronto, Vancouver**GRANITE FLOOR PAINT**

Dries quickly, will successfully withstand to the greatest possible degree the hard usage to which FLOORS, PIAZZAS, STEPS and KINDRED SURFACES are necessarily subjected.

There are no competing paints equal to it. Made by a special process, used only by us, from finest materials, by experienced workmen, and is free from the usual defects of this class of paints.

GALLONS, HALF-GALLONS QUART

WRITE FOR PRICES.

STANDARD PAINT & VARNISH CO., Limited
WINDSOR, ONTARIO.

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, June 30, 1904.

HOLIDAYS in two consecutive weeks have interfered somewhat with the paint and oil business, but the volume of sales is fairly satisfactory. Trade has kept up well this month, but the losses of the quiet Winter months will never be entirely overtaken. Dry colors are in brisk demand this week, as last, and ochres and oxides are meeting with a quick distribution. Stains, enamels and varnishes are in good demand for decorative purposes.

Turpentine is easier, but there is a firmer feeling in linseed oil. Various quotations are given for the latter, and at the moment it is not easy to quote with exactitude, but there is no doubt that there has been an advance of from one to two cents over last week's minimum prices. White lead is still selling at ridiculously low prices, but quotations below pretty closely represent the market, at least for the higher grades. We quote:

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

Putty—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 82c per gallon; two to four barrels, 81c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

Linseed Oil—Raw, 1 to 4 barrels, 44c to 45c; 5 to 9 barrels, 43c to 44c; boiled, 1 to 4 barrels, 47c to 48c; 5 to 9 barrels, 46c to 47c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c; 25 lb. drums, 15 1-4c; 1 lb. packages, 16c; 1-2 lb. packages, 18c; 1 lb. tins, 17c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

Ontario.

Office of HARDWARE AND METAL,

10 Front Street, East.

Toronto, June 30, 1904.

SOME dealers are quoting an advance of 1c per gallon on linseed oil in 10 barrel lots, giving as their reason for so doing the advance in the English market. Other dealers have so far not changed their quotations. There is a good trade doing, without any alteration in quotations on other lines.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls, 43c; boiled, 46c; 5 to 9 bbls., raw, 42c; boiled, 45c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points. Another quotation is: Raw, 1 to 4 bbls., 43c; boiled, 46c; 5 to 9 bbls., 42c; boiled, 45c; 10 barrels and over open, ex-Toronto, 2 per cent. off 30 days.

Turpentine—Single bbls., 81c; 2 to 4 bbls., 80c; 5 bbls. and over, f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders,



COVERS THE EARTH? NO! COVERS HOUSES? YES!

The ambition of **ANCHOR LIQUID HOUSE PAINT** is to cover houses better than any other Paint. The ambition is realized because the only White Lead used in ITS manufacture is **BRANDRAM'S B. B. GENUINE**, the World's standard for Whiteness, Durability and Covering Capacity.



Nature covers the earth.

Anchor Brand Paint covers houses and other things

HENDERSON & POTTS, Limited, Manufacturers, Halifax, N.S.
HENDERSON & POTTS CO., Limited Manufacturers, Montreal

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green

of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.



GILLETT'S LYE

—IS GOOD FOR—

Removing **LETTERING
FROSTING
OR PAINT**

of any kind from

Glass Doors or Windows

Something worth knowing.

Sell Gillett's Lye for this Purpose.

**E. W. GILLETT COMPANY LIMITED
TORONTO**

COVERS THE HOUSE

It doesn't matter whether it's the chimney pots
or the mantel piece in the drawing-room

STERLING PAINTS

Do the work in a bright and thorough manner.

DEFY THE SUN

ARE WATERPROOF

DO NOT LOSE LUSTRE

WON'T CRACK

Put up in handy tins, beginning with half-pints.

Every dealer should handle "STERLING" Paints—The paint that wears well.

Canadian Oil Company, Limited

HEAD OFFICE

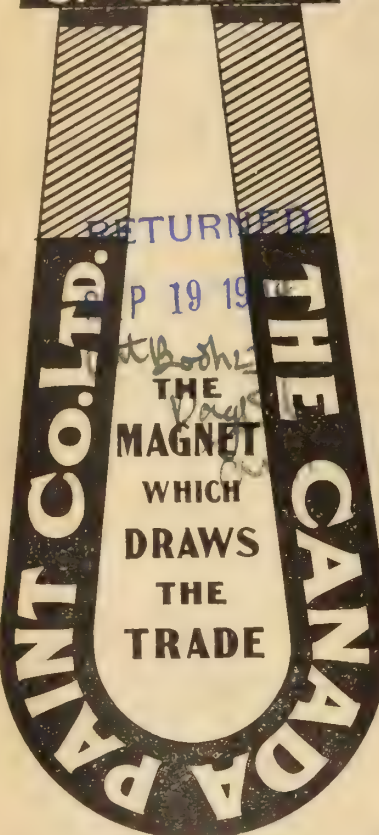
Scott and Front Streets, Toronto

T. H. HAMILTON, General Manager



Special Attention To Letter Orders

**PAINT, VARNISH
TRADE
OF CANADA.**



ADDRESS

The

Canada Paint Company

Limited

Montreal

or

Toronto

in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

English Paris Green—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

St. John, N.B.

THERE has been no change in the price of burning oil since the low price was quoted after the change of duty. This, of course, is a season of light shipment. There is a fair business reported in linseed oil. While the local price continues low, markets are firmer, and an advance in price is looked for. Of course, it is also in these lines a quiet season. Turpentine is rather weak at the lower prices named a few weeks ago. Dealers have expected even lower figures, but holders of stock abroad seem able to keep the market from any serious break. There is, however, an easy feeling. In lubricating oils prices are unchanged. Sharp competition in these lines keeps prices at fair values. There is some interest in fish oils. There is no doubt we will see lower prices. There is some old oil still here, and dealers are not inclined to purchase new oil. The quantity offered so far is not large, but there will be every effort made to force prices down. In Newfoundland non-freezing cod liver oil prices have been about cut in two since last year. This, of course, is affected by the Norway product.

Window Glass.

MONTREAL.

Prices are nominally unchanged. A fair business is passing. We quote: First break, 50 feet, \$1.70; second break, \$1.80 for 50 feet. First break, 100 feet, \$3.25; second break, \$3.45; third break, \$3.95; fourth break, \$4.20.

TORONTO.

Much interest continues in the amendment to the recent tariff changes. While this new regulation will undoubtedly improve the situation for the importers of Belgian glass, it is held that there is still danger of the Canadian market getting under the control of one firm who import British glass. We quote nominally as follows: Star, first break at \$3.30 per 100 feet, and Double Diamond, first break, at \$5.10. Discount, 15 and 20 per cent.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost **must** accompany all advertisements. In **no case** can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

SITUATIONS VACANT.

BLACKSMITH—General; good on floor; steady job; state wages. M. W. Horning, St. George. f

BLACKSMITH—Two to five years' experience; horseshoeing and jobbing. Jas. Birrell, Fanshaw, Ont., near London. f

HARNESSMAKER. Apply J. T. W. Low, 419 College street, Toronto. f

HARNESSMAKER—At once. W. Buchanan, Aylmer, Ont. f

THREE house painters; two years' experience, state wages. Apply F. Anthony, Brampton. f

TINSMITH—At once; reliable man for general work. Apply, stating wages, to Geo. A. Elliott, Brantford, Ont. f

TINSMITH—Experienced man; steady employment; good wages. Apply to Dempsey Bros., Marmora, Ont. f

TINSMITH—One to two years' experience, wanted at once. Apply Thos. E. Hoar & Co., 14 Dundas west, Toronto Junction. f

TINSMITH—Must be good; steady work. Apply Boxall & Matthie, Lindsay. f

TINSMITH—Permanent position to the right man. Apply Whitten Drummond Co., Limited, 173 King street east, Toronto. f

TINSMITH—First-class man; at once; good on furnace work; to take charge of an established trade. Box 144, **HARDWARE AND METAL**, Toronto. (28)

WANTED—Good tinsmith for country shop accustomed to general job work, roofing and furnace work; wages \$2 50 per day; must be temperate; state experience. Apply to J. A. Gilhuly, Arden, Man. (28)

BUSINESS CHANCES.

HARDWARE business wanted in live city or first-class town of not less than five thousand population, located in good farming community. Apply Box 146, **HARDWARE AND METAL**, Toronto. (25ff)

July 2, 1904

HARDWARE AND METAL

Have you
tried it?

Tried what?

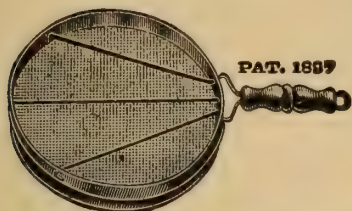
SELLING
MANTELS.



This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co

76 YORK ST., TORONTO.



The FAIRGRIEVE GAS TOASTER

Retails at 25c. The only Toaster guaranteed to toast on
gas, gasoline or blue flame oil stoves without taste or smell.
Write for prices.

THE FAIRGRIEVE MAN'FG. CO.,
295 COLLEGE ST., TORONTO.

U. S. Branch: 289 Jefferson Ave., DETROIT
Agents for Great Britain: Heine, Solly & Co., Sutton
House, 2 Old Street, London, E.C.

The Hamilton Steel & Iron Company

LIMITED

HAMILTON, - CANADA.

OPEN HEARTH

STEEL CASTINGS

OF ANY WEIGHT.

DIAMOND EXTENSION FRONT GRATE.

Ends Slide in Dovetails similar to
Diamond Stove Back.

Diamond
Adjustable Cook
Stove Damper

Patented March 14th, 1893.



Patented December 22nd, 1896.

EXTENDED.
4 x 11 to 6 x 21.



For Sale by Jobbers of Hardware.

Manufactured by THE ADAMS COMPANY, Dubuque, Iowa, U.S.A
" TAYLOR-FORBES CO., Limited, Guelph, Ontario.

The Arctic Ice Chest



Made in three sizes—

No. 20..... 19 x 13¼ x 13¼
No. 30..... 23 x 16 x 16
No. 40..... 27 x 19¼ x 19¼

Refrigerator Made on Scientific Principles.

Handy and Compact.

Lined with Galvanized Iron.

Japanned in Oak and Ornamented.

Silver-Plated Tap.

Suitable for Yachts, Picnic Parties, Summer Residences, etc

A Boon in the Sick Room. Keeps the food for the
invalid Fresh and Sweet at all times.

PRICES ON APPLICATION TO

The THOS. DAVIDSON MFG. CO. Limited. . . . MONTREAL.

STOVES AND TINWARE

Hints on Heating.

IN a booklet describing the "Kelsey" Warm Air Generator, for church, school and home heating, the James Smart Mfg. Co., Brockville, give the following hints:

A given quantity of warm air circulation is required to properly and economically warm each cubic foot of space.

Each room should be accurately measured, and such sizes of pipes and registers specified, as will easily do the work expected, in any kind of weather, and without unduly forcing the heater.

Always use a heater amply large, so as to have some available reserve heating power when required. A too small heater means large fuel expenditure.

Unsatisfactory heating jobs are always those where a cheap heater and cheap installation have been employed, by some "rule of thumb" heating expert.

Free and easy circulation must be provided for in any warm air heating system. This can be assured in either of two ways, viz., one practical ventilating system using outside air, or taking cold air returns from coldest part of ground floor rooms to heater. The latter will be found most economical. There should always be one fair sized cold air duct from outside, with damper to close off when desired.

The sending of warm air into a room already filled, is a practical impossibility. Removing the cold air naturally causes the warm air to flow in, and the result is an even temperature in all parts.

When the air is taken from the inside the combined area of all cold air pipes should be something more than that of all warm air pipes, to overcome loss of friction in the longer travel. When outside air is used the minimum capacity of the cold air duct should equal 80 per cent. of the combined capacity of all warm air pipes.

Never overlook the important fact that the heater can only furnish a volume of warm air equal to the cold air supply, or to the air circulating capacity of the heater itself. Many so-called "heating experts" seem to entirely ignore

this fact, and thus fail to get results that are possible, besides very materially shortening the life of the heater.

In this connection bear in mind that the Kelsey has three times as great heating surfaces and warm air capacity as that of the hot air furnace with same size of fire-pot.

As warm air rises and cold air falls, give warm air pipes all the elevation, and cold air pipes all the descent, possible. If necessary excavate and lower the heater, it will be money well spent.

Any heater can only give best results when attached to a smoke flue or chimney with a proper draft. Never lose sight of the fact that it is the chimney that must furnish the draft. Heaters do not have drafts, as many seem to suppose.

Specifications for Tin Roofing.

EDITOR Hardware and Metal: Can you suggest some practical specifications for tin roofing, something that has been found satisfactory by some reliable firm.

ROOFER.

Winipeg, June 21, 1904.

Ans.—The following, adopted by a Pittsburg firm, is forwarded by W. C. Cronmeyer, of the American Sheet & Tin Plate Co., Pittsburg, Pa.:

FLAT SEAM ROOF.

First—Use tin of good quality; see that the tin is square; notch corners one inch; turn one-half inch edge; use seven nails or cleats to the sheet; hammer smooth with mallet; flux with rosin, using plenty rosin; solder with hot soldering copper, soldering on top of seam, and soak the solder well into seam; use on IC tin five pounds of 1-2 x 1-2 solder, on IX tin six to seven pounds per square. See that the rosin is well cleaned off after the roof is finished; then give the roof one coat of paint made of pure English venetian red or pure oxide of iron and pure boiled linseed oil and a little turpentine; in thirty to ninety days a second coat of the same paint, or good graphite, using in each case only linseed oil for a thinner; in one year a third coat; after that you will be required to paint only once in every three or four years. We take

no stock in painting under side of flat seam roof. If the sheeting boards are not tongued and grooved, there should first be put on a layer of dry felt paper to exclude the air from cracks and joints and to prevent nail heads from coming in contact with tin roof. If the sheeting boards are old and dry, 20x28 inch plates are preferable; if the sheeting boards are wet and green, 14x20 inch plates are preferable. Twenty by twenty-eight inch sheets will give you an average measurement on roofs of 385 feet per case, 112 sheets 20x28 inches. Average measurement on roof 14x20, 112 sheets, 187 feet to box.

STANDING SEAM ROOF.

Have the tin square; notch corners for seams a little to ease the bending of the several layers; allow one-half inch for cross seams; solder well; put tin in straight rolls 20 inches wide; use 1 1-4 and 1 1-2 inch tongs for side or standing seams; cleat every 12 inch, two nails to cleat; be sure to have your seam perfect; never put a standing seam roof on where you have less than 1 1-2 inch fall to the roof; paint the same as flat seam roof. In standing seam roofs always put a layer of dry felt paper on roof before laying tin, it will exclude the air from seams and will prevent nail heads in sheeting from coming in contact with the tin. You will have an average of 352 feet per box of 112 sheets, 20x28 inch tin. If the above directions are followed you will have no trouble, provided a good quality of tin is used. We can show roofs now which have been exposed thirty-five to forty-five years, and are still intact.

New Foundry.

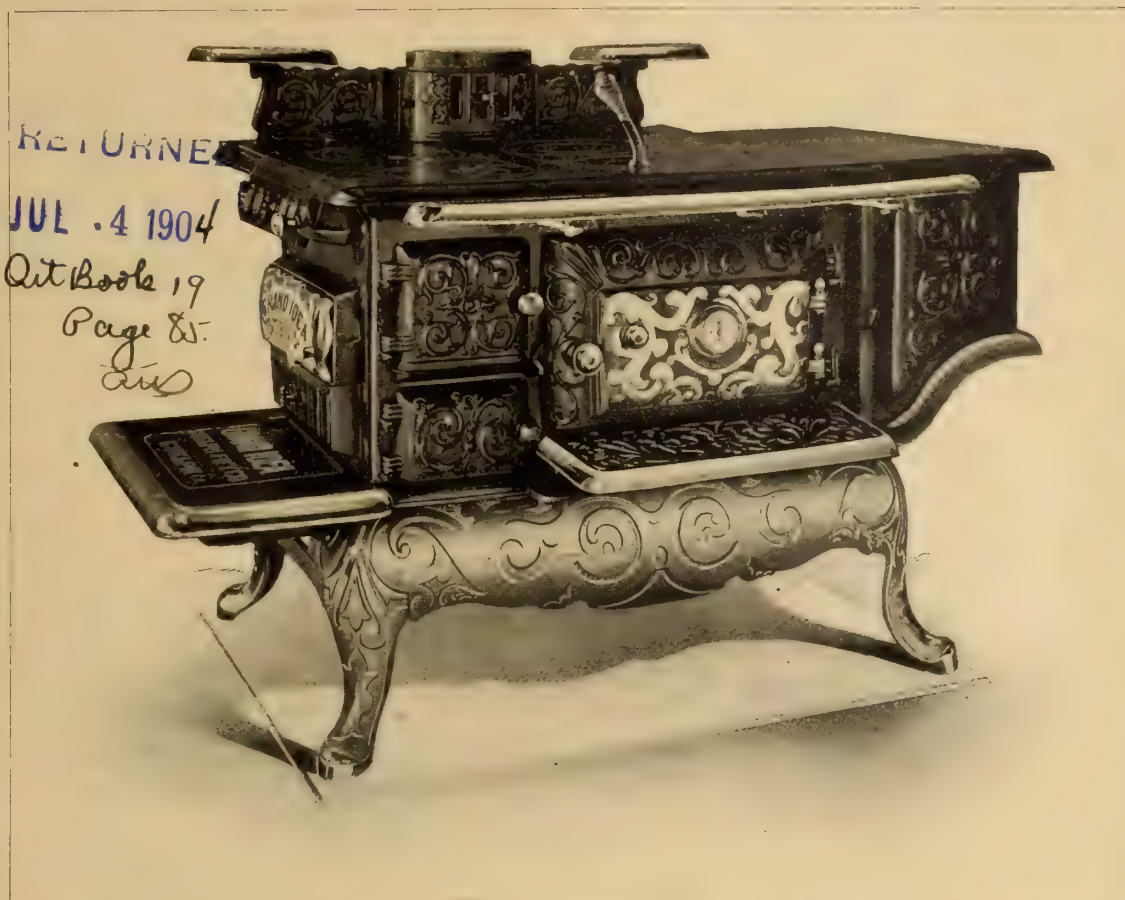
Work has been commenced on the new stove and range foundry of Butterworth & Co., on Broad street, Ottawa. The new one will be a very decided improvement over the old one on Queen street. The building will be completed in about two months. The number of employes at the outset will be twenty-five, but this number will be increased as the operations proceed.

GRAND IDEA RANGE

The Pride of Canada

Our Very Latest Production

NAME AND DESIGN BOTH REGISTERED AND FULLY PROTECTED



Deep Fire Box

Duplex Grates

Vertical Oven Damper

Reliable Oven Thermometer

Reservoir That Will Heat

Properly Proportioned Flues

We claim that the GRAND IDEA, besides possessing more points of excellence and convenience than any other, is the most highly finished range yet produced in Canada.***

MADE IN FOUR SIZES AND SIXTEEN STYLES

WRITE FOR PRICES AND SECURE THE AGENCY FOR YOUR DISTRICT

GUELPH FOUNDRY CO., Limited
GUELPH, ONTARIO

HEATING AND PLUMBING

THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, June 30, 1904.

SUPPLY houses report an active trade this week, somewhat better than the average for this season of the year. Collections are now reported quite

satisfactory, and the general outlook is considered promising. Iron pipe prices are still unsettled, and it is impossible as yet to do more than quote nominal prices, which it is not pretended are maintained. The price is a matter of bargaining in all cases. In other lines prices are steady.

Range Boilers—There is some inquiry this week. Prices are steady, as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—Business is fairly active, and prices are fairly steady. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs. extra; f.o.b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—There is an average trade passing for the season. Discounts continue, as follows: Light soil pipe, 3 to 6 in., 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

Iron Pipe and Fittings—As noted above, it is impossible to quote with exactitude, as there is no pretence that nominal prices are being maintained closely. Subject to concessions, we quote nominal prices as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55;

1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Solder—Prices are nominally the same, but owing to the continued weakness of the tin market, some slight concessions are doubtless obtainable. Bar solder is quoted at 17 1-2c, and wire at 18c.

Soldering Irons—Prices are as follows: 1 to 1 1-2 lbs., per lb., 37c; 2 lbs. and over, 34c.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, July 1, 1904

A NEW list on compression and fuller work has been issued by the Canadian manufacturers, and goes into effect this week. The new list bears a slight advance over the former one. Otherwise, prices are unchanged, cutting in pipe and fittings still being carried on. A good business continues in plumbing lines, while the demand for waterworks supplies is still large.

Lead Pipe—Business keeps up well. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—A good trade is doing at steady prices. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—There is a good trade, with cutting still prevalent. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1-2 to 70 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

Iron Pipe—The low prices noted last week still prevail. A good trade is being done at the figures. We quote f.o. b. Toronto as follows: Black pipe, 1-2 in., \$1.95; 1-4 in., \$1.95 to \$2.05; 3-8 in., \$2.15 to \$2.25; 1-2 in., \$2.35; 3-4 in., \$2.95 to \$3; 1 in., \$4.25 to \$4.30; 1 1-4 in., \$5.95 to \$6.10; 1 1-2 in., \$7.15 to \$7.40; 2 in., \$10; 2 1-2 in.,

\$18; 3 in., \$21; 3 1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.70 to \$2.85; 3-8 in., \$2.90 to \$3.05; 1-2 in., \$3.20 to \$3.30; 3-4 in., \$4.10 to \$4.20; 1 in., \$5.95 to \$6.15; 1 1-4 in., \$8.30 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

Enameled Ware—An active trade in this line continues. Though prices are firm, there is not much likelihood of an advance. We quote: "Standard," 5 1-2 feet rolled rim, first quality, at \$21.60; second quality, \$15.50 to \$16.

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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Vice-President—Robt. Ross, Toronto.
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A. RAMSAY & SON

MONTREAL

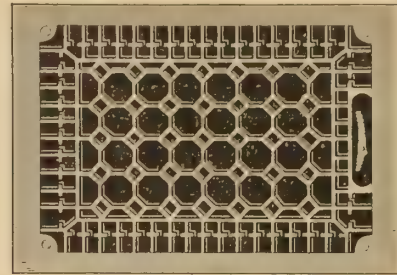
PAINT and VARNISH MAKERS

THE RAMSAY PAINTS
 THE UNICORN WHITE LEAD
 THE EXTERIOR WHITE LEAD
 THE RAMSAY PURE OIL COLORS
 THE RAMSAY PURE COACH COLORS
 THE RAMSAY DRY COLORS
 THE RAMSAY VARNISHES

WINDOW GLASS
 FANCY GLASS
 MURALO FOR THE WALL
 CALCIMO FOR BEST DECORATING
 GLAZIERS' DIAMONDS
 PAINTERS' SUPPLIES

ESTABLISHED
 1842

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

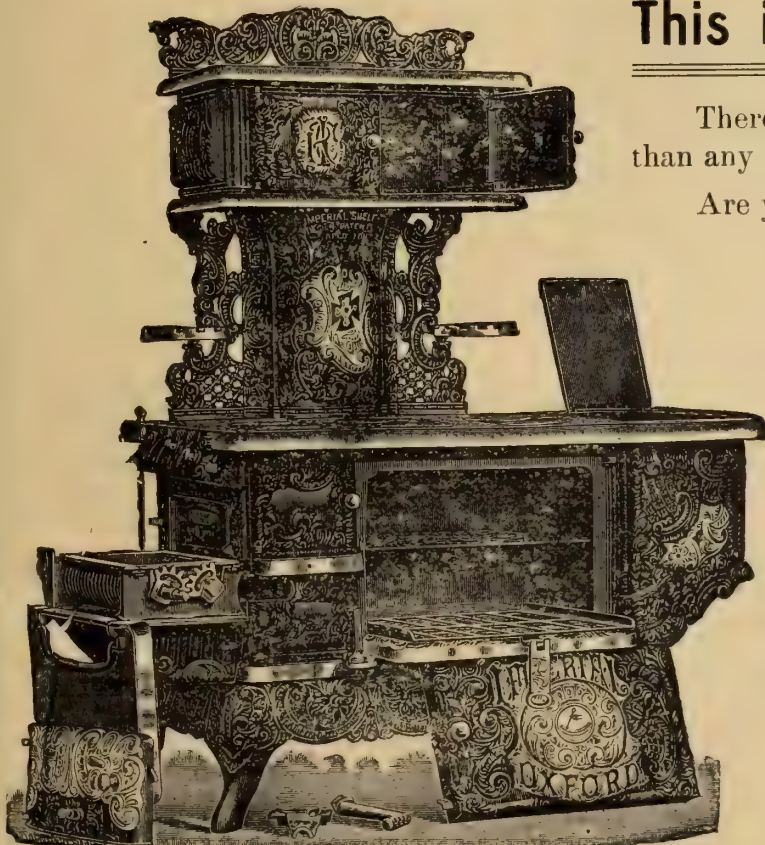
OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



This is Stove-Buying Time

There are probably more stoves bought now than any other time of the year.

Are you getting your share of the trade?

The dealers who handle the

Imperial Oxford Range

were never busier. Each year this range becomes more popular. It is merit that does it—every user of an Imperial Oxford starts advertising its goodness to her friends. That means good business for Imperial Oxford dealers. Are you one?

The Gurney Foundry Co., Limited,

TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
 MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., LIMITED
 CALGARY, ALTA.

THE EVAPORATOR OR HOT AIR MOISTENER.

By J. W. HUGHES, Montreal.

FIFTY years ago the only means of warming houses in the City of Montreal was the open fire place, the wood burning furnace, and the three-foot box stove, the latter being "the heating apparatus." Whatever the apparatus used, the evaporator was always in evidence,

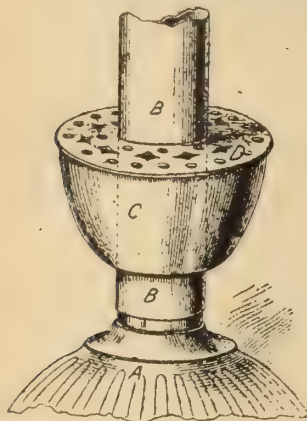


Fig. 1—Applied to stove pipes.

and the especially constructed pan for the furnace, the copper kettle for the grate, and the evaporator, generally of planished copper, for the box stove. It was as much the duty of the attendant in charge to see that the evaporator was cleaned and was kept supplied with water, as it was to have the wood box filled and the fire given proper attention.

In due time, when I was a young apprentice, the hard coal burner came in—Littlefield's railroad base burner, or some similar apparatus. These were highly ornamental, but had no place for an evaporator,

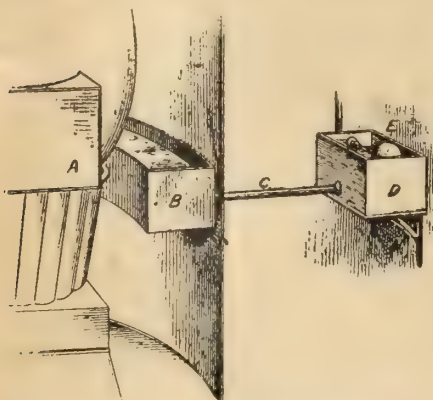


Fig. 2—Automatically supplied furnace air moistener.

a fatal defect, which was going to kill its sale. This trouble was over-joint of pipe, around which was constructed a planished copper evaporator, as shown in Fig. 1. A represents the top of the stove and B the stove pipe, C the evaporator fastened to the stove

pipe, and D a cover punched with ornamental holes. The cover was made to slide up and down on the stove pipe to facilitate filling the evaporator with water. This evaporator held sway as long as the stove was the means of heating.

When the modern hot air furnace came in and replaced the stove as a means of warming, the evaporator was still retained and was usually a cast iron pan suitably shaped and placed between the casing and the furnace proper. In the best practice it was automatically supplied with water by means of a small cistern outside of the furnace, containing a ball cock, which governed the supply, the arrangement being similar to that shown in Fig. 2, in which A is the furnace, B the evaporator, C the pipe connecting the evaporator through the casing T and the cistern O containing a ball cock controlling the water supply.

Even when the combination furnace, which originated in Montreal, became general as an improvement on the hot air furnace, the evaporator was still retained. The modern hot water heating apparatus, which also had its origin in Montreal, has driven out nearly all other means of heating in the ordinary, better class dwelling. With the incoming of the hot water system, the demand for the evaporator ceased, the public having in some way got the idea that the heat of hot water radiators was moist, which it certainly is not. I have had in my own house some twenty years a means of moistening the air warmed by hot water radiators, consisting of copper vessels made of a special shape, to slip in between the loops of the radiators with lips extending out, for convenience in filling, as shown in Fig. 3. These evaporators are made of sheet copper, and the radiators which I use permit them to be made 2 feet 6 inches long, 2 feet deep and 1½ inches wide. Of course, such an evaporator must be modified to suit the radiator in connection with which it is used. Mine can be easily pulled out for cleaning, and not only contributes an agreeable moisture to the atmosphere, but has been considered indispensable by my family.

For the wall coils similar vessels were made to slip down between the coil and the wall, being provided with ornamental hooks to extend over the wall coils and support them, as shown in Fig. 4. They certainly add to the comfort of the dwelling and do away with the cracking of furniture, knife handles, piano keys and such articles. It is my firm conviction, as the result of many

years' experience, that some form of apparatus should be supplied with every type of heating system to moisten the air in our excessively dry climate. By the ocean side, or near the great lakes, nature's evaporator may supply the necessary moisture; but no one who has had no experience has any idea of the dryness of a cold Winter day when the

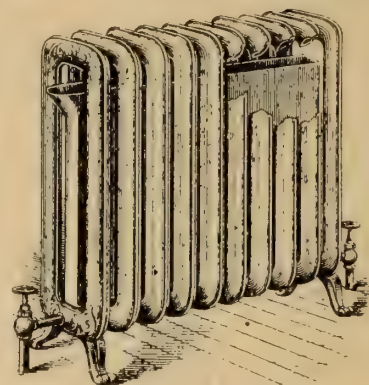


Fig. 3—Applied to radiator.

snow is like, and in fact is, a dry powder.—Metal Worker.

President Thibeault at Ottawa.

Mr. Joseph Thibeault, of Montreal, president of the National Plumbers' Association, is in Ottawa this week attending an executive committee meeting of the association. Final arrangements are being made for the annual convention to be held in Toronto the third week in July.

An Automatic Gas Lighter.

THE International Gas Appliance Co., 164 Bay street, Toronto, have in "Ignito" a gas mantle that is calculated to arouse widespread interest. It is an incandescent gas mantle which is an automatic lighter, being chemically prepared in such a manner that as soon as the gas comes in contact with it the chemicals become

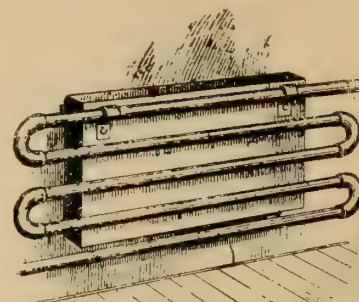


Fig. 4—A wall coil evaporator.

incandescent and ignite the gas. It is estimated that it costs ½¢ per hour for a light of 100 candle power, a remarkable low cost. It is particularly adapted for use in stores, public buildings, private houses, and, in fact, can be used to advantage in any place where artificial light is required.

P-H



PIPE THAT IS PIPE

Do You Do Plumbing?

If you do, you use Iron Pipe.

We have, at considerable expense, undertaken to make a Pipe that IS Pipe. We say to you with all assurance that this is the most satisfactory pipe made in Canada and the most pleasing to work with.

The Quality will be remembered long after the Price is forgotten.

Write for Prices.



Page-Hersey Iron & Tube Co., Limited, Guelph, Can.

ASK YOUR JOBBER.

NOT IN THE COMBINE

Ask for Prices of
Shovels, Spades, Scoops, Etc.
WE HAVE A LARGE STOCK.

CANADA HARDWARE CO., Limited, Montreal

Self - Lighting Incandescent Gas Mantles.

No match required. Always ready, and no gas burning when not in use.

The novel light of this scientific age.

All the convenience of Electric Light at less than one third the cost.

Agents and representatives wanted in every town using gas.

Send us 90c. for sample burner mantle and globe complete, postage prepaid.

SOLE SELLING AGENTS FOR CANADA

THE INTERNATIONAL GAS APPLIANCE CO., Limited
164 Bay St., TORONTO, CANADA.

RETURNED

JUL .8 1904

Growth of Winnipeg.

THE development in the West is shown in the rapid growth of existing cities, towns and villages, and the founding of new places. Perhaps the most prominent symbol of the progressiveness of Western Canada is the progressiveness of the city of the West, Winnipeg. The progressiveness of Winnipeg is quite evident from the large number of new buildings going up, and the larger number each year.

The value of the building permits issued up to the present time this year nearly equals the value for the whole of last year. Up till June 20. the value of the buiding permits issued this year was \$5,563,000, while the value for permits for the whole of 1903 was \$5,689,400. The following is a statement of the permits issued before June 20 of each year since 1900, and from this statement some idea of the rapid growth of Winnipeg may be had:

June 20,	Permits.	Bldgs.	Cost.
1900	218	269	\$ 643,974
1901	323	427	1,023,795
1902	438	536	1,662,125
1903	560	735	2 573,350
1904	906	1,220	5,563,000

Building Permits.

TORONTO.

Geo. Irwin, dwelling on Walmer road, \$5,000.

Thos. Vallentyne, dwelling on Shaw street, \$4,500.

Jas. Brennan, dwelling on College street, \$2,500.

Haynes & Co., dwellings on Brock avenue, \$3,400.

W. J. Fielding, factory on William street, \$1,800.

Thos. Needham, dwelling on Perth avenue, \$1,500.

M. Sullivan, dwelling on Dupont street, \$2,500.

H. N. Love, dwellings on First avenue, \$3,700.

H. N. Love, dwellings on First avenue, \$8,800.

C. Jolliffe, dwelling on Albany avenue, \$3,500.

G. H. Wichello, dwelling on Smith street, \$1,700.

J. J. Scott, dwelling on Davenport road, \$1,100.

S. Armour, dwelling on Concord avenue, \$4,000.

Geo. Phillips, dwelling on Huron street, \$8,000.

T. Woodbridge, dwelling on Spadina avenue, \$5,000.

R. Hutson, dwelling on Langley avenue, \$2,500.

H. S. Mara, dwelling on Gore Vale avenue, \$3,400.

S. F. Aberdeen, dwelling on Margueretta street, \$4,000.

J. E. Hoare, dwelling on Chicora avenue, \$3,000.

Miss O. Howarth, dwelling on Church street, \$5,500.

Thos. Robertson, dwelling on Dupont street, \$2,000.

R. Stuthers, dwelling on Ossington avenue, \$1,600.

W. Pennock, dwelling on Gore Vale avenue, \$3,000.

Copp, Clark, warehouse on Front street west, \$30,000.

The Wm. Bonnell Estate, warehouse on Bay street, \$9,000.

Mrs. J. Grafton, dwelling on Cottingham street, \$8,500.

M. W. Willson, dwellings on St. Clarens avenue, \$5,000.

The McClary Mfg. Co., warehouse, on King street west, \$25,000.

J. W. Butchart, dwellings on Bathurst and Dupont streets, \$8,000.

Hendrie Cartage Co., stable on Front, Windsor and Peter streets, \$40,000.

MONTREAL

Thos. Benard, St. Hubert street, a dwelling, \$1,000.

Stark Cooperage Co., 20 King street, a factory, \$4,200.

Morton & Smith, on Selkirk avenue, four dwellings, \$10,000.

A. Picard, Mount Royal avenue, three dwellings, \$2,500.

S. T. Vallieres, Marquette street, ten houses, to cost \$12,000.

Alfred Gravel, Mount Royal avenue, three dwellings, \$35,000.

C. Galibert & Co., alteration on building at 929 St. Catherine street, \$2,000.

L. Robitaille, Bordeau street, two dwellings, one at \$2,000 and one at \$22,000.

McGill University, corner of McGill College avenue and Sherbrooke street, Y.M.C.A. hall, \$70,000.

Rev. B. S. Dubeau, alteration on building at corner of Lagauchetiere and St. Urbain streets, \$7,000.

Grey Nuns, of Guv street, alteration on building at corner of St. James and Cathedral streets, \$4,000.

OTTAWA.

James Kelly, dwelling, Eccles street, \$5,000.

Martin Gogin, dwelling, Elm street, \$3,500.

C. Nelson, dwelling, Gilmour street, \$1,200.

Thomas Dean, dwelling, Rochester street, \$1,000.

W. H. Lester, four houses, Second avenue, \$4,500.

Corporation of Ottawa, brick addition to police station, Queen street, \$12,300.

Building Notes.

A building is to be built for M. Marier, on Aley street, Ottawa.

The foundation of the C.P.R. depot in Winnipeg has been commenced.

The Central Canada Insurance Co. are going to erect a \$20,000 building in Manitoba.

The Central Canada Insurance Co. have decided to erect a \$20,000 building in Brandon, Man.

A new Greek Catholic church is to be erected on corner of MacGregor and Stella streets, Winnipeg.

Two additional storeys are to be added to the Kilgour Rimer block in Winnipeg. D. Smith is the architect.

W. M. Mitchell, architect, Winnipeg, is calling for tenders for the erection of a new building on Mill street for M. I. Hieatt.

Tenders are being called by W. B. Lait, architect, for the erection of a four-storey solid brick and stone business block in Winnipeg.

A three-storey brick and stone block is to be erected on the corner of Hastings street and Westminster avenue, Vancouver, B.C., during the Summer.

NEW SALT COMPANY.

A company for the manufacture of salt from the wells of the Cleveland-Sarnia Sawmills Company's mills is being formed in Sarnia. The new company will be known as the Empire Salt Co., and will be capitalized at \$50,000. J. I. Carter will be the manager. It has entered into a contract with the Cleveland-Sarnia Sawmills Company to operate the salt block at the mill property and will have a plant with a capacity of 50 barrels per day.

THIS REPRESENTS OUR
NEW PATTERN.

Mrs. Potts' SAD IRON

GREAT SELLER.

THE H. R. IVES CO., Limited, MONTREAL.



Just like fishing

Building up trade is just like fishing.

If you use the right kind of bait and cast your line where the kind of fish you want are most plentiful, you'll quite likely get a number of bites.

Then if you go about it right you are pretty sure to land most of them.

Apply the illustration to business.

If you want to catch the hardware trade, cast your line where all the good hardware merchants in Canada congregate every week—looking for bait to build up their businesses with—in **HARDWARE AND METAL**. But

Suppose results don't come at first
What be yew goin' tur dew?
Take out yewr ad, and kick yewrself,
An' go ter feelin' blew?
Uv course yew hain't; yew're goin' tew fish,
An' bait an' bait again;
Bimeby some nibbles 'n bites 'll come,
Then yew'll pull 'em in.

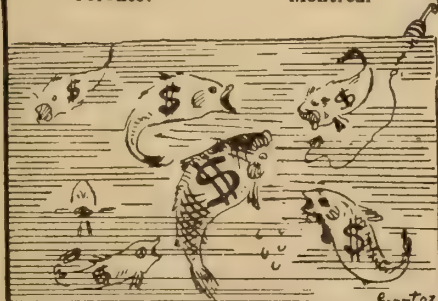
Our Department of Advertising Service is now providing good bait for a number of our advertisers—and stands ready to help a few more in this connection.

Drop us a line about it.

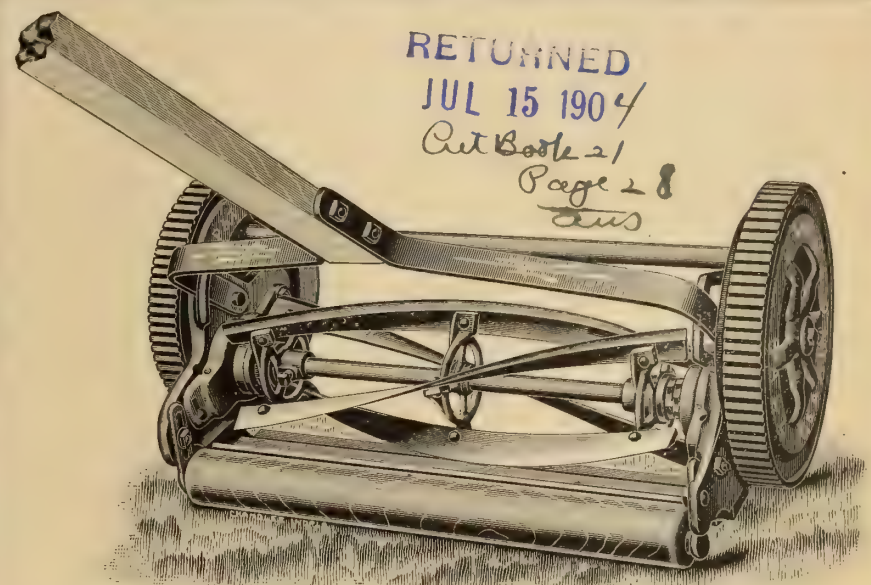
Hardware and Metal

10, Front St. E.
Toronto.

232 McGill St.
Montreal



Department of Advertising Service



The F.&N. Ball-Bearing Lawn Mower.

The only Ball-Bearing Lawn Mower that has proved a success. A feature of the F. & N. Mower is a very simple device to take up wear in the bearings. This device is found in no other mower. It has other improvements too numerous to mention here. Our illustrated circular will tell you all about it. Write for it and get prices that will interest you.

John Bowman Hardware & Coal Co.
LONDON, CANADA.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

RECONSTRUCTION operations have already begun on the property of the Rat Portage Lumber Co., Rat Portage, Ont. The planing mill will be replaced in the first instance, and it will be equipped with the most modern machinery. While the different buildings are being replaced, the various operations will be carried on by the company in temporary establishments. A day and night shift has been begun in the company's mill at Norman.

* * *

A. C. Flumerfelt, president of the International Coal & Coke Co., says that the prospects for the Coleman mines in Alberta are exceptionally good. Two hundred tons will be taken from these mines from now on, and the supply is pronounced by J. R. Elliott, coal consulting engineer, Pittsburg, to be the largest he had ever seen.

* * *

The comparative value of the minerals produced in Canada during 1902 and 1903 is shown below. This shows an increase in value of \$14,000,000 nearly:

Province.	1903.	1902
Nova Scotia.....	23,472,412	19,501,031
British Columbia.....	17,495,954	17,486,550
Ontario.....	12,870,593	13,577,440
Yukon.....	12,113,015	12,500,000
Quebec.....	2,772,962	4,000,000
Manitoba and Northwest Territories.....	14,856,847	2,515,953
New Brunswick.....	590,495	607,129
	\$84,172,378	\$70,188,103

NOTES.

The cigar factory of James McInerney, Hamilton, Ont., has been destroyed by fire.

The Parkhead Basket Factory, Owen Sound, has resumed operations under the management of the Keenan Bros. Co., Ltd.

A 5,000 barrel flour mill is to be established in Fort Frances, New Ontario, by a party of Minneapolis capitalists.

The large saw mill of John Whiteside, Huntsville, Ont., has been totally destroyed by fire. The mill property is valued at \$12,000. The lumber yard was saved from damage.

A by-law has been carried by the ratepayers of Regina to exempt the property of the Regina Planing Mill & Supply Co. from taxation for a period of ten years.

The town of Regina, N.W.T., has passed a resolution granting the Western Manufacturing Co., of Indian Head, a free site and exemption from taxation for ten years.

F. H. Clergue, A. B. Malvin, and W. F. Fitch are the prime movers in a company that is being organized at the present time to erect a large coke plant in the Michigan Soo at a cost of \$750,000.

The ratepayers of Oshawa have passed a by-law to loan the Canada Saddlery and Harness Mfg. Co. the sum of \$10,000 for ten years, without interest, to assist in the building and equipping of that company's plant.

There are now 400 men at work as general laborers about the yards of the Dominion Iron & Steel Co., Sydney, N. S. The construction of the rail mill is slowly being proceeded with.

COMPANIES INCORPORATED.

The Canadian Iron Co., Ottawa, capital \$2,000,000; purpose, to carry on the operations of a mining, milling, reduction and development company. The directors are: H. F. Gooderham, H. N. Barry, and R. Weir, all of Toronto.

The Dominion Brokerage and Contracting Syndicate, Ltd., Ottawa, capital \$20,000; purpose, to carry on business as general brokers and contractors. The directors are: R. Jones, R. V. Sinclair, M. V. Jones, A. M. Sinclair, all of Ottawa.

The Star Chrome Mining Co., Ltd., Montreal, capital \$450,000; purpose, to carry on a mining industry. The directors are: F. Bayard, P. E. Beaudry, J. A. Brossard, P. Desforages, E. Gauthier, all of Montreal.

The Athabasca Fish Co., Ltd., Selkirk, Man., capital \$100,000; purpose, to catch and pack fish. The directors are: J. K. McKenzie, R. Smith, H. C. Ray, J. A. McDougall, W. J. Cline, all of Selkirk, Man.

Thos. May & Co., Ltd., Montreal, capital \$48,000; purpose, to carry on in general the business of an importer of fancy dry goods, ribbons and milliners' supplies. The directors are: E. J.

Major, B. McNally, H. Giroux, all of Montreal; Wm. MacCulloch, Toronto.

The C. Robin Collas Co., Ltd., Halifax, capital \$1,000,000; purpose, to conduct a general fish, commission and export business. The directors are: A. E. Collas, A. H. Whitman, R. E. Harris, W. A. Henry, H. B. Stairs, all of Halifax.

The Canadian Vacuum Cleaner Co., Ltd., Montreal, capital \$100,000; purpose, to purchase the Canadian patents for the system of cleaning by vacuum suction. The directors are: S. Carsley, W. F. Carsley, S. Carsley, T. Bienvenu, F. Hague, all of Montreal.

LICENSES GRANTED.

Eral Artificial Silk Co., incorporated in Delaware; purpose, to manufacture and deal in artificial silk in Ontario, capital \$40,000.

THE COMMERCIAL TRAVELER.

WHO is he, and from whence he comes? The commercial traveler is an enigma. He comes from here, there and everywhere. He is recruited from the successes and the failures of the commercial life. He steps across the threshold into the great arena when he is twenty, when he is forty, when he is sixty, and he makes his exodus at any time of his career. His exit is determined by his success. The warehouse, the office, the pulpit, the bar, the army, the navy, all alike furnish their quota to the ranks, and the man who has had his training for the business stands no higher chance of success than he who steps from the command of a regiment to the command of five cases of samples and an hotel porter. The warehousemen or the clerk is promoted to the "road"; the traveler is promoted to a responsible position in the house. The commercial traveler is an opportunist to his finger tips; the destroyer of all conventions, and the one living concrete example that successful business men are born, not made. There is no royal road to success. The rungs of the ladder which he climbs, or tries to climb, are bodily strength, tact, energy, and adaptability to environment. Such is the man who is at one and the same time the indispensable factor in English commercial life; one of the pillars of its greatness; the best omen for its future, when successful; when the reverse, he makes his bow, and retires, and inveighs against the conditions that have made him what he is;

CHARLES BAYNES, England.
 MAKER OF THE KNUZDEN BROOK, BLACKBURN,
"CLICK-CLACK"
 HACK SAW BLADES.
 In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

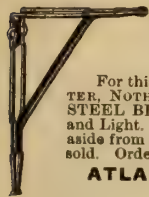
The Hanover Portland Cement Co., Limited
 HANOVER, ONTARIO.

Manufacturers of the Celebrated **"Saugeen Brand"**
 OF PORTLAND CEMENT.
 Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,
 Cables— Emlyn Engineering Works
 "Machinery," Newport. NEWPORT, MON., ENGLAND



Will Hold Up a Shelf !

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,
 New Haven, Conn., U.S.A.

To Manufacturers' Agents

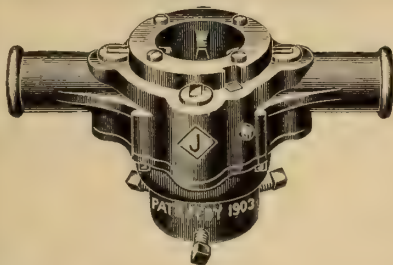
HARDWARE AND METAL has inquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of inquirers in our various offices throughout Canada and in Great Britain without charge.

Address

Business Manager

HARDWARE AND METAL
 Montreal and Toronto



It is a fact that one man with our **PATENT PIPE DIE** can easily do the work of two men with any other. Send us your address and we will explain HOW and WHY.

A. B. JARDINE & CO.

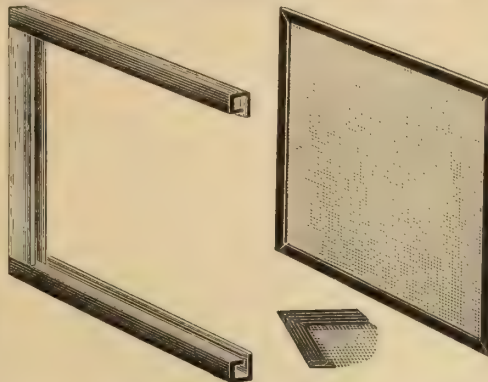
Mfrs. TAPS and DIES.

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PIG IRON FOR IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

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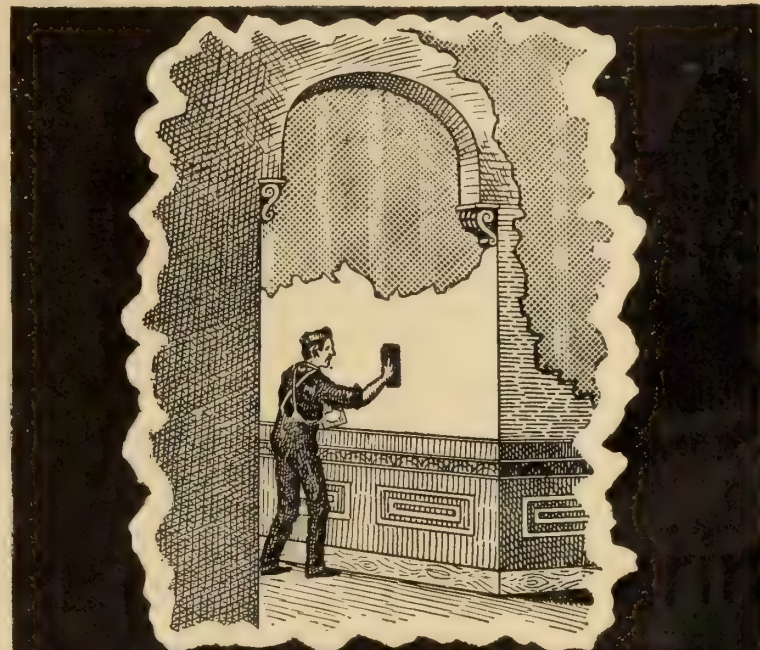
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would prefer our Metal-framed Window Screens to the common sort, especially so since they cost no more. Then why not sell our Metal Screens ?

Write for Booklet and Price List.

C. M. CUTTS & CO.

Makers, Toronto Junction, Ont.



Pedlar's "Perfect" Metal Lath

CHEAP AS WOOD

Delivered to any railway station in Canada, for 10c. per square yard. Discount to dealers. Circulars and samples on request.

Pedlar People, Oshawa, Can.,
 or 767 Craig St., Montreal, Que.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

Order a stock of

"Windmill Best"**Galvanized Sheets**

Cut Prices

Quality Right

Made by

John Cummers & Sons, Ltd.
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Weekly output, 2,000 tons of sheets.

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Sample for 10 cents.

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19 LUDGATE HILL - LONDON, ENG.

\$2 FOR THIS SMALL SUM THE **\$2**

MANUFACTURER and SUPPLY MERCHANT

may keep posted on new openings
for trade.

The CANADIAN CONTRACT RECORD

reports weekly all projected building and other
construction works throughout Canada as well
as new business enterprises.

Send your name and address with \$2 for
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\$2 TORONTO and MONTREAL **\$2**

A MOST USEFUL FIRM

We cut to your order, any size, on short notice

BRASS and COPPER

—Sheets
—Tubes
—Rods

The waste is ours—not much waste, though.

The Booth Copper Co.,

LIMITED,

119-123 Queen St. East,
TORONTO.

he forgets that he himself is the greatest factor in the circumstances.

One man succeeds where another fails. On the same ground, representing the same house, selling the same merchandise at the same prices, and under identical conditions, one man will sell twenty thousand pounds' worth of goods in a year where another sells two thousand pounds' worth. One will get his business for two per cent., where the other costs twenty per cent., on the sales. One will condemn the goods he sells, the prices his principals fix, and seek (and find) fifty causes for his failure, and his successor will laud the self-same goods, the self-same conditions, to the skies. We do not ignore established houses with spotless reputation, names of a hundred years, but a bad traveler can no more sell their goods than those of a house founded yesterday: a good man will sell the goods of a new firm as well as those of an established house, always provided, of course, that the prices are no higher than those of competing houses.

An old Yorkshire traveler, representing an important London house, was known amongst his immediate coterie as the "fair-weather traveler." His headquarters were in Leeds, where he had his home, and he returned to the bosom of his family each night. He maintained a very respectable turn-over for his principals, but he never went forth in quest of business in wet weather. So great was his hold on his customers, so solid their opinion of him and of his judgment—in the matter of weather especially—that half a dozen telegrams on a wet morning would bring half a dozen customers to his office, and as much business would be booked, and at less expense to him, than if he had gone to his customers.

A bad shopkeeper—a failure as a tradesman—will often make a good traveler, and where can we find a place for better experience than a retail shop? In his daily life he comes in contact with scores of travelers; sees by comparison the good points of a good traveler, and the bad points of a bad one; profits equally by both, and when failure comes in his own business, he goes on the road fully equipped with the knowledge that makes a successful ambassador of commerce. If he has the ability to use that knowledge in combination with his own talents, it may mean the turning point of his career.

Out in all weathers—excepting always our Yorkshire friend—subject to many vicissitudes, the butt for many a harsh and often unnecessary remark from his actual and prospective customers, the life of the traveler has its disadvantages, but he is the one representative above all others of the commercial fabric who has his freedom. He is the creator of his destiny and the maker of his future, and it is in his own hands whether he shall be branded as one of the successes—with unlimited possibilities in the way of partnerships and increased emoluments—or as one of the failures of his profession.—Herbert's Leather Goods Record.

Memorial Windows

UNEXCELLED
DOMESTIC ART GLASS

H. E. St. George, London, Ont

Orlan Clyde Cullen, C.E.L.L.M.

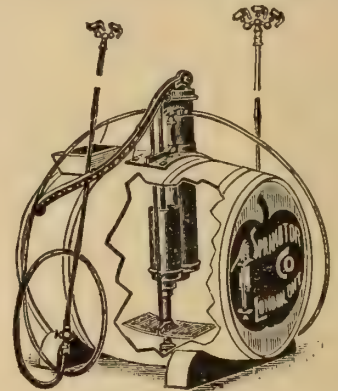
Counseller at Law U.S. Supreme Court.
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Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP

Warren White-Sulphur Springs,
Totten P.O., Virginia.

**THE SPRAMOTOR**

is recognized by the users as the most durable and efficient apparatus yet invented, for the

Prevention of blight and bugs on fruit and potatoes.

For the destruction of wild mustard in the grain crops without injury to the grain, and for

The painting of buildings.

Has been awarded First Place by the Canadian Government in actual contest, and

The Gold Medal at the Pan-American.

The Trade fully protected.

Write for particulars and discounts. Terms liberal.

THE SPRAMOTOR CO.,

68-70 King St., - - LONDON, CAN.

**METAL SKYLIGHTS and WINDOW FRAMES**

Glazed with FIREPROOF GLASS.

CORRUGATED IRON and FIREPROOF DOORS**ROOFINGS, CORNICES and CEILINGS****A. B. ORMSBY LIMITED,**

MANUFACTURERS AND CONTRACTORS,
Cor. Queen and George Streets,
TORONTO, ONT.

FULL STOCK

Salt Glazed Vitrified

Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.

PORTLAND CEMENTS

Best German, Belgian and English
Brands.FIRE BRICKS
FIRE CLAY
FLUE LININGS
DRAIN PIPES
HARD WALL PLASTER
CALCINED PLASTER
WHEELBARROWS
MORTAR STAINS.A Full Stock of Builders' and Con-
tractors' Supplies.

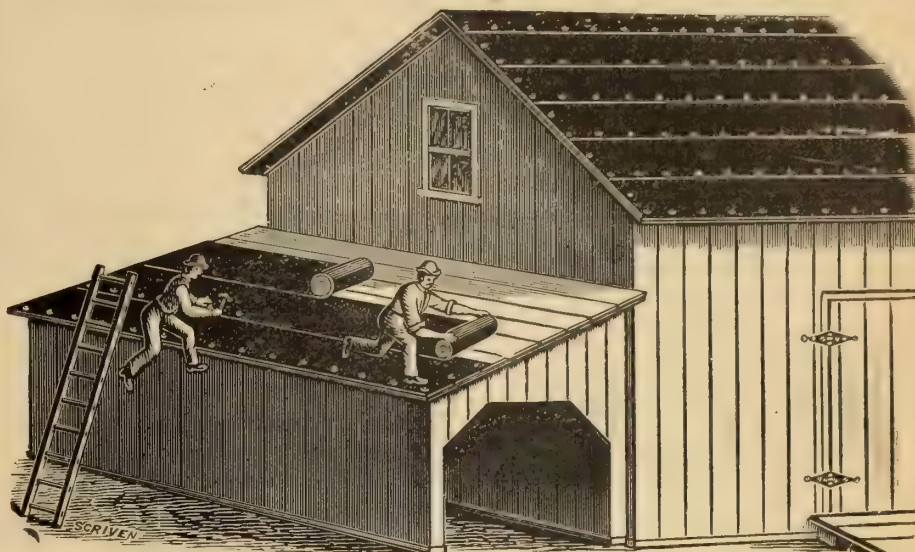
W. McNALLY & CO.

40 to 52 McGill St (Cor. Wellington St.)
MONTREAL.

Write for our quotations.

Permanent, Economical,
Handsome.

Arrow Brand Asphalt Ready Roofing.

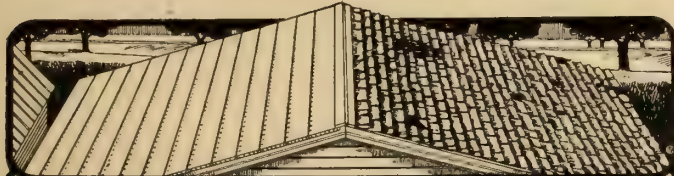
Comes in rolls, ready to lay, with nails and cement.
All ready covered with white sea gravel. No further attention after laid.A. G. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sun, Frost, Water, Fumes DO NOT affect it. Write to-day for agency.

USE MICA ROOFING

For Flat or Steep Roofs. It is Waterproof,
Fireproof, quickly and very easily laid, and
cheaper than other roofing.

HAMILTON MICA ROOFING CO.,

60 Catherine Street North, - - - HAMILTON, CANADA.

CONSTRUCTION vs. DESTRUCTION.
CARE vs. CARELESSNESS.
BEST MATERIAL vs. POOR MATERIAL.
REX FLINTKOTE ROOFING vs. ALL OTHER ROOFING.REX Flintkote Roofing
TRADE MARKThe above tells the whole story, and means to the dealer a quick-selling, business-
bringing roofing vs. the ordinary kind that never sells, because people don't want it,
and when they are persuaded to try it never come back again. If you want satisfied
customers for roofing, you should write us to-day about Rex Flintkote Roofing.

J. A. & W. BIRD & CO., 49 India Street, Boston, Mass.

Mr. Hardwareman.

Do you get all you can out of the building
operations in your town?

Manufacturers

are making some good propositions on this
page; look over their advertisements and,
if you do not handle their goods, write them
asking for full particulars.

ALWAYS BE READY TO ENLARGE YOUR BUSINESS.

The Saw That Sells Itself.

When placed in the hands of the intelligent mechanic the ATKINS High Grade Silver
Steel Hand Saw sells itself. You simply show it and the saw does the rest.ATKINS Silver Steel Hand Saws with Perfection Handles are warranted
the FINEST Saws on earth in material, temper, grinding and finish.

Write for Catalogue and Prices.

E. C. ATKINS & CO.

C. D. TEN EYCK, Sales Agent for Canada.
Toronto Office: 30 Front St. East. Tel. Main 1896.ATKINS
ALWAYS AHEADLeading Saw and Tool Manufacturers
Factories: INDIANAPOLIS, IND.
Northwestern Branch: Minneapolis, Minn.

FINANCE AND INSURANCE

TWENTY years ago the annual premium income of British life assurance societies was only £14,766,000, representing an annual saving of only 8s 4½d per head of population, or £2 1s 10d per family of five persons. Ten years ago the premium income reached to \$22,283,000, an annual saving of 11s 8¼d per head of population, or £2 18s 5d per family; but according to the most recent returns the annual premium income of life companies is now no less than £33,264,000, an annual saving of 15s 10d per head of population, or £3 19s 2d per family. Thus in 20 years the annual sums set aside as a provision for death and old age have increased 125 per cent., and as the growth in population has been only 19 per cent., the annual rate of savings per head of population for this purpose has nearly doubled.

* * *

ACCORDING to the New York Journal of Commerce the United States is rapidly becoming afflicted with a multiplicity of small banks of no considerable resources or reliability. Congress in 1900 authorized the establishment in places of not more than 3,000 inhabitants of so-called "national banks," the minimum of capital permitted being \$25,000. Since this action at Washington no less than 1976 new national banks have been created, with an aggregate capital of \$114,591,000. These small institutions have appeared in the largest number in the west and the south, though many have cropped up in the eastern states also.

* * *

FINANCIALLY, Canada is at present in a sound condition. In his budget, the Minister of Finance announced a further reduction in the national debt of probably seven and one-half million of dollars. Canada's debt reached its highest point two years ago, when it amounted to nearly \$272,000,000. Last year a reduction of seven million was effected, and this, together with the present reduction, will bring the debt down to about \$257,500,000. The possibility of making these reductions has been due to an excess of revenue over expenditure during the past two fiscal years. In 1903 this excess was \$14,345,166. This year it is estimated at \$16,500,000. A considerable portion of the surplus has in both cases gone towards expenditure on capital account, which accounts for the fact that less than fifty per cent. has been applied to a reduction of the debt.

* * *

AS the Summer advances the amount of United States silver circulating in Canada increases, and the tills of our merchants are found on inspection to contain quite a noticeable percentage of foreign coin. The presence of this foreign money is detrimental in more ways than one. It hurts the national pride in things Canadian

and it removes a source of revenue from the Government. The coinage of silver is carried on by the Government at a profit, being the difference between the face value of the coin and the cost of the material and manufacture. So long as the coin is not issued too freely, it maintains its standard value and the Government receives its profit. If, instead of the Government keeping the supply of coins up to the demand, that demand is supplied by foreign coins, the Government loses the profits on a corresponding amount of coin. Under these circumstances, some method should be introduced by means of which the foreign coins could be periodically cleaned out. The banks would naturally appear to be the proper channels through which to accomplish the work, but the banks are not directly interested. The Government is the real sufferer, and the Government should make it worth while for the banks to collect and ship out of the country all foreign coins.

* * *

ENDOWMENT life insurance is growing very fast, while insurance for the whole term of life is relatively stationary. In the past fourteen years the sums insured by endowment insurance in Great Britain increased from £34,000,000 to £183,000,000, a growth of £149,000,000. During the same period the growth in insurance for the whole term of life was only £67,000,000.

* * *

THE N. B. Board of Fire Underwriters have sent copies of the following circular to the local civic authorities of each town in the province:

The New Brunswick Board of Fire Underwriters have had under consideration the urgent necessity which exists for improvement of building laws and in the fire protection of the various towns in this province.

The numerous conflagrations in Canada and elsewhere have emphasized the necessity for the enactment of stringent regulations to prevent the spread of fires.

The rates fixed by this board are based largely on the construction and situation of the buildings, and the means of fire prevention, and in the future still more attention will be paid to these points.

It is recommended that in all congested framed districts the height of buildings be limited, and shingle roofs entirely prohibited.

The New Brunswick Board of Fire Underwriters trust, that in their efforts to diminish the fire loss in this province, they will meet with the hearty support of the civic corporations and property owners generally of the various towns and that the public will recognize the fact that, independent of the fire insurance companies, they are largely interested in reducing the fire hazard and in the adoption of measures tending to prevent the spread of fires.

WESTERN ASSURANCE COMPANY.

Incorporated
1851
**FIRE
AND
MARINE**

Head Office
Toronto, Ont.
 Capital - \$2,000,000.00
 Assets, over - 3,546,000.00
 Annual Income - 3,678,000.00

HON. GEO. A. COX, President.

J. J. KENNY, Vice-President and Man. Director.

C. C. FOSTER, Secretary.

Money

CAN BE SAVED BY MEANS
OF AN ENDOWMENT POLICY.

**YOU CAN ONLY SECURE
SUCH A POLICY WHILE YOU
ARE IN GOOD HEALTH.**

Pamphlets and Full Particulars regarding the
New Accumulation Endowment Policy
sent on application.

Confederation Life ASSOCIATION.

W. H. BEATTY, PRESIDENT.

W. C. MACDONALD,
ACTUARY.J. K. MACDONALD,
MANAGING DIRECTOR.

HEAD OFFICE, - TORONTO, CANADA.

MANUFACTURERS AND MERCHANTS.

It may be necessary for your staff to have fidelity bonds. We act as surety on such. We are known the world over.

Write to us for terms and particulars.

The London Guarantee & Accident Co., Limited,

D. W. ALEXANDER, General Manager for Canada,
Canada Life Building, - - - TORONTO.

BRITISH AMERICA ASSURANCE COMP'Y

FIRE AND MARINE.

Incorporated 1833

CASH CAPITAL, \$1,000,000.00.
 TOTAL ASSETS, \$2,024,096.02.
 LOSSES PAID SINCE ORGANIZATION, \$23,886,005.32.

HEAD OFFICE, - BRITISH AMERICA BUILDING,
Cor. Front and Scott Sts., Toronto.

HON. GEO. A. COX, President. J. J. KENNY, Vice-President
P. H. SIMS, Secretary. and Managing Director

THE CANADIAN BANK OF COMMERCE

Paid-up Capital, - - - \$8,700,000
 Rest, - - - \$3,000,000

HON. GEO. A. COX, President. B. E. WALKER, General Manager.

HEAD OFFICE: TORONTO, CANADA.

LONDON, ENG., OFFICE,
60 Lombard St., E.C.NEW YORK AGENCY,
16 Exchange Place.

The attention of exporters and importers is requested to the undernoted list of correspondents of this bank, embracing all parts of the world. In conjunction with its widespread system of branches, numbering 110 and covering all important points in Canada and on the Pacific coast of the United States, it is thus enabled to offer them unexcelled facilities for the transaction of domestic or foreign banking business.

List of Bankers and Chief Correspondents:

GREAT BRITAIN—

The Bank of England; The Bank of Scotland; Lloyds Bank Limited; The Union of London and Smiths Bank, Limited; Parr's Bank, Limited.

UNITED STATES—

New York The American Exchange National Bank, The Fourth National Bank; Boston The Bank of Nova Scotia, The National Shawmut Bank, The National Suffolk Bank; Buffalo, The Marine National Bank; Chicago, The Northern Trust Company; Detroit, The People's Savings Bank, The Commercial National Bank; Minneapolis, The North-Western National Bank; New Orleans, The Commercial National Bank.

FRANCE—

Credit Lyonnais, Paris; Messrs. Lazard Freres & Cie, Paris.

GERMANY—

Deutsche Bank.

HOLLAND—

Disconto Maatschappij, Rotterdam.

BELGIUM—

Messrs. J. Matthieu & Fils, Brussels; Banque d'Anvers, Antwerp.

SWITZERLAND—

La Banque Federale, Zurich.

INDIA, CHINA, JAPAN and the PHILIPPINE ISLANDS—

Chartered Bank of India, Australia and China; Hongkong and Shanghai Banking Corporation.

SOUTH AFRICA—

Standard Bank of South Africa, Limited; Bank of Africa, Limited.

AUSTRALIA and NEW ZEALAND—

Union Bank of Australia, Limited; Bank of Australasia; National Bank of Australasia, Limited; First National Bank of Hawaii, Honolulu; Bishop & Co., Honolulu.

SOUTH AMERICA—

British Bank of South America, Limited; London & Brazilian Bank, Limited; Bank of Tarapaca and Argentina, Limited.

MEXICO—

Banco de Londres y Mexico.

WEST INDIES—

Bank of Nova Scotia, Kingston, Jamaica; Colonial Bank and Branches; National Bank of Cuba, Havana, Cuba; Bank of Bermuda, Hamilton, Bermuda.

Foreign Exchange Bought and Sold.

Commercial Letters of Credit Issued.

CAPITAL PAID UP, - - \$1,000,000.
 RESERVE FUND, - - 1,000,000.

THE METROPOLITAN BANK.

DIRECTORS

R. H. WARDEN, D.D., President S. J. MOORE, Esq., Vice-President
 D. E. THOMPSON, Esq., K.C. His Honor W. MORTIMER OLARK, K.C.
 THOS. BRADSHAW, Esq.

HEAD OFFICE, - TORONTO.

W. D. ROSS, GENERAL MANAGER.

GENERAL
BANKING
BUSINESS
TRANSACTION

SAVINGS DEPARTMENT

at all Branches.

ACCOUNTS SOLICITED

Drafts Bought and Sold.
Letters of Credit Issued.

ALEX. McARTHUR & CO., Limited, 82 McGill St., Montreal

YOU CAN DEPEND ON OUR

Ready Roofing, Sheathing and Black  Diamond Tarred Felts

These and our

Building Papers, Fibre and Manilla Wrappings, etc.,

are made at our own Mills and Factory

FELT FACTORY

Harbour and Logan Sts., MONTREAL

PAPER MILLS

JOLLIETTE, QUE.

CURRENT MARKET QUOTATIONS.

July 1, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.

Lamb and Flag and Straits—

56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

TIN PLATES.

Charcoal Plates—Bright. Per box.
M.L.S., equal to Bradley—
I.C. usual sizes..... \$6 50
I.X. "..... 8 00
I.X.X. "..... 9 50

Famous, equal to Bradley—
I.C. 6 75
I.X. 8 25
I.X.X. 9 75

Raven and Vulture Grades—
I.C. usual sizes..... 4 25
I.X. 5 00
I.X.X. 5 75
I.X.X.X. 6 50

"Dominion Crown Best"—Double

Coated, Tissue. Per box.

I.C. 5 50
I.X. 6 50
I.X.X. 7 50
Allaway's Best—Standard Quality.
I.C. 4 50
I.X. 5 50
I.X.X. 6 50

Coke Plates—Bright.

Bessemer Steel—
I.C. usual size, 14x20 3 35
I.C. special sizes, base 3 60
20x28 7 10

Charcoal Plates—Terne

Dean or J. G. Grade—
I.C. 20x28, 112 sheets 7 50
I.X., Terne Tin 10 50

Charcoal Tin Boiler Plates.

Cookley Grade—
X.X., 14x56, 50 sheet bxs. 7 00
" 14x60, "
" 14x65, "
Tinned Sheets. 7 25 7 50
72x30 up to 24 gauge. 7 25 7 50
" 26 7 75 8 00

IRON AND STEEL.

Common bar, per 100 lb. 1 80
Refined 2 20
Horseshoe Iron 2 25
Hoop steel, 1 1/2 to 3-in. base 2 75
Sleigh shoe steel, 2 10
Tire steel 2 30
T. Firth & Co.'s tool steel, per lb. 0 12 1/2 0 13
B. K. Morton & Co.—
" Alpha " tool steel 0 70
" M " Self-Hardening 0 60
" I " Standard 0 14
Jessop's high speed steel 0 60
" standard tool steel 0 14
" crucible sheet steel 0 14
Chas. Leonard's tool 0 08
Crucible Steel Co.—
" Black Diamond 0 10
" Silver steel 0 13
" Special 0 17
" Rex high speed steel 0 65
" Self Hardening 0 45
Sanderson's Crucible Tool 0 04
" Superior 0 12
" Extra And 0 15
" Self Hardening 0 45
" Rex high speed 0 65
Jonas & Colver's tool steel 0 10
" Air Hardening 0 70
Drill steel, per lb. 0 08

BABBIT METAL.

"Tandem," A per lb. 0 27
" B 0 21
" C 0 11 1/2
Frictionless Metal 0 23

Syracuse Smelting Works:

Aluminum, genuine 0 45
Government, 0 44
Tough, 0 40
Hard, 0 40
Dynamo 0 30
Special 0 25
Harmony 0 22
Car Box 0 20
Extra 0 15

The Canada Metal Co.:

Imperial, genuine, 0 40
Metallic 0 30
Hercules 0 20
Star 0 15
No. 1 0 12
No. 2 0 10
No. 3 0 06
No. 4 0 05

Geo. Langwell & Son.

No. 1 0 08
No. 2 0 07
No. 3 0 05 1/2
Extra 0 09 1/2

BLACK SHEETS.

Montreal Toronto
10 and 16 gauge 2 25 2 50
18 gauge 2 30 2 50
20 " 2 30 2 50
22 to 24 gauge 2 35 2 70
26 2 40 2 80
28 2 40 2 90

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary 2 60
All bright 3 50
Galvanized Canada Plates—

Ordinary. Dom. Crown.

18x24x52 4 25 4 35
" 60 4 50 4 60
20x28x80 8 50 8 70
" 94 9 00 9 20

GALVANIZED SHEETS. Queen's

Fleur-de-Lis. Gordon Crown. Comet Bell. Head
16 gauge 3 65 3 75
18 to 24 gauge 3 75 3 75 3 75
26 4 00 4 00 3 90 4 00
28 4 25 4 25 4 05 4 25

American brands, \$4.00 for 28 gauge.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 1/2 " " " " 5 60
" 7-16 " " " " 4 45
" 7-16 " " " " 3 85
" 9-16 " " " " 3 70
" " " " " 3 55
" " " " " 3 45
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Halter, kennel and post chains, 40 to 40 and 5 per cent.
Cow ties 40 p.c.
Tie out chains 65 p.c.
Stall fixtures 35 p.c.
Trace chain 45 p.c.
Jack chain, iron, single and double, discount 35 p.c.
Jack chain, brass, single and double, discount 40 p.c.

COPPER.

Ingot. Per 100 lb.
Casting, car lots 13 75
Bars.
Cut lengths, round, 1/2 to 1 in. 21 00 23 00
" round and square, 1 to 2 inches 21 00 23 00

Sheet.

Plain, 16 oz., 14x48 and 14x60 20 00
Plain, 14 oz. 21 00
Tinned copper sheet 24 00
Planished 32 00

Braziers' (in sheets).

4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 " 0 21
" 50-lb. and above " 0 20

BOILER AND T.K. PITTS.

Plain tinned, per lb. 0 28
Spun, per lb. 0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent
Sheets, hard-rolled, 2x4 0 23
Tubing, base, per lb. 0 23 1/2

ZINC SPELTER.

Foreign, per 100 lb. 6 00
Domestic " " 6 25

ZINC SHEET.

5-cwt. casks 6 15
Part casks 6 50

LEAD.

Imported Pig, per 100 lb. 3 20
Bar, per lb. 0 05
Sheets, 2 1/2 lb. sq. ft., by roll 0 06 1/2
Sheets, 3 to 6 lb. 0 06

NOTE.—Cut sheets i.c. per lb., extra. Pipe, by the roll, usual weights per yard, lists at 7c. per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe 8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00 per 100 lb.; buck, seal and ball, \$7.50. Discount, 17 1/2 p.c. Prices are f.o.b. Toronto, Hamilton, Montreal, St. John and Halifax. Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.

Zinc 6 00
Copper, discount 20 per cent. off revised list.

BATHS.

Standard Enameled.
5 1/2-ft. rolled rim, 1st quality 21 60
" 2nd 17 85

CLOSETS.

Net.
Fittings 1 00
Plain Simplex Syphon Jet 9 00
Emb. 9 50
Fittings 1 25
Low Down Elgin or Teutonic, plain 6 00
Low 6 50
Connection 1 25
Plain Richelieu 4 25
Emb. 4 50
Connections 1 25
Basins, F.O., 14-in. 1 50
Basins, oval, 17 x 14-in. 1 50
Basins, " 19 x 15-in. 2 00

IRON PIPE.

Black pipe—
Per 100 feet.
1/2 inch 1 95
" 2 05
" 2 15
" 2 25
" 2 35
" 2 45
" 2 55
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American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 18
French "	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt. Less than this quantity in extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	3 00
Super magnetic oxides, 33 p.c.	2 00
Burnt sienna	9 00
"umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 08
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 39
Whiting, bbl.	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD. Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorator's Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs.	4 75	
No. 1, 560 lb. casks, per cwt	4 00	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 50
Pure, kegs	4 75
No. 1, casks	4 25
No. 1, kegs	4 50

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 20
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
"British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle	1 00
Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 20
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 40
Bladders in kegs, boxes or loose	1 85
25-lb. tins.	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
"No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
"orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
"black japan	1 10	1 20
"No. 1	0 85	0 90
Elastiline varnish, 1 gal. can, each	2 00	
Granite floor finish, per gal	2 75	
Maple Leaf coach enamels, size 1, \$1.20; size 2, 70c.; size 3, 40c. each		
Sherwin-Williams' kopal varnish, assorted case, from to 1 gal., \$2.50.		

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Coopers	0 19	0 20
Huttner	0 12	0 16
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 40 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 5 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 10 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

wads.	per 10.
Best thick brown or grey felt wads, in ½-lb. bags	80 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

AXES.

Gilmour's, discount 65 and 5 per cent. off list.	
Chopping Axes	
Single bit, per doz.	7 00 10 00
Double bit, "	10 00 18 00
Bench Axes, 40 per cent.	
Hunters' Axes, 25 per cent.	
Boys' Axes	5 50 6 00
Splitting Axes	6 25 7 00
Handled Axes	7 00 12 00
" "	10 00

AMERICAN AXE AND TOOL CO.	
Red Ridge, boys', handled	5 75
"hunters"	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE	
Ordinary, per gross	6 00 7 00
Best quality	10 00 12 00

BELLS.

Hand.	
Brass, 60 per cent.	
Nickel, 55 per cent.	
Cow.	
American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

Door.	
Gongs, Sargent's	5 50 8 00
"Peterboro", discount 50 and 10 per cent. off new list.	
Farm.	
American, each	1 25 3 00
House.	
American, per lb.	0 35 0 40

BELLOWS.	
Hand, per doz.	3 35 4 75
Moulders', per doz.	7 50 10 00
Blacksmiths', discount 40 per cent.	

BELTING.	
Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	
Agricultural, not wider than 4 in., 75 per cent.	

Bits.	
Auger.	
Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.	
Gilmour's, 47½ per cent.	
Expansive.	
Clark's, 40 per cent.	

Gimlet.	
Clark's, per doz.	0 65 0 90
Diamond, Shell, per doz.	1 00 1 50
Nail and Spike, per gross.	2 25 5 20

BLIND AND RED STAPLES.	
All sizes, per lb.	0 07½ 0 12

BOLTS AND NUTS	
Carriage Bolts, common (\$1 list)	
" " 3-16 and ½	60 and 10
" " 5-16 and ¾	55 and 5
" " 7-16 and up	55 and 5
" " full sq. (\$2.40 list)	60
" " Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ¾ and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., 5½ to 6c.	

BOOT CALKS.	
Small and medium, ball	per M. 4 25
Small heel	4 50

BRIGHT WIRE GOODS.	
Discount 62½ per cent.	

BUTCHERS' CLEAVERS	
German	per doz. 6 00 9 00
American	" 12 00 18 00

BUTCHER KNIVES.	
Bailey's	per doz. 0 60 6 30

BUILDING PAPER, ETC.	
Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 400 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Roof "small packages"	0 25
Refined Tar	per barrel 5 00
Coal Tar	" 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 10

BULL RINGS.	
Copper, \$2.00 for 2½-inch, and \$1.90 or 2-in.	

BUTTS.	
Wrought Brass, net revised list.	
Cast Iron.	
Loose Pin, discount 60 per cent.	

Wrought Steel.	
Fast Joint, discount 65, 10 and 2½ per cent.	
Loose Pin, discount 65, 10 and 2½ per cent.	
Berlin Bronzed, discount 70, 70 and 5 per cent.	
Gen. B ronzed	per pair 0 40 0 65

CARPET STRETCHERS.	
American	per doz. 1 00 1 50
Bullard's	" 6 50

CASTORS.	
Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS	
Nos. 32 and 33	per gross 7 50 8 50

CHALK.	
Carpenters' Colored, per gross	0 45 0 75
White lump	per cwt. 0 60 0 65
Red	" 0 05 0 06
Crayon	per gross 0 14 0 18

CHISELS.	
Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.	
Colonial Stock Foods, 50c. packages, per doz	\$4 00
" " 25c. pkgs., "	2 00
" " 10c. "	75
" " 25-lb. pail, each	1 30
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz	1 25
Worm	1 25
International 1 Stock Foods, \$1 packages, per doz.	8 00
International Stock Foods, per pail	2 75
" " 10-lb. "	10 50
" " Poultry "\$1pkgs. per doz.	8 00
" " Worm Powders, 50c. pkgs.	4 00
" " Pine Healing Oil, per doz	8 00
" " Pheno-Chloro, \$1pkgs. per doz	8 00
" " Hoof Ointment	8 00
" " Compound Absorbent	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.	

CLIPS.	
Axle, discount 60 per cent.	

EASY TO PUT ON HARD TO WEAR OUT

Aptly describes two of the many advantages possessed by Paterson's Wire
Edged Ready Roofing, the only popular substitute for Shingles.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.

Plain or Corrugated.

2-inch	.....per 100 feet	3 00
3 "	....." "	4 00
4 "	....." "	5 25
5 "	....." "	6 75
6 "	....." "	9 00

CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	.....per pair	0 17½
S. & D., " 5	....." "	0 22½
S. & D., " 6	....." "	0 15
Boynton pattern	....." "	0 20

DOOR SPRINGS.

Torrey's Rod	.....per doz.	1 75
Coil, 9 to 11 in.	....." "	0 95 1 65
English	....." "	2 00 4 00

DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Millar's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.
Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAVETROUGHS.

10-inchper 100 ft. 10 00

ELBOWS (stovepipe.)

5 and 6-inch, common	.....per doz.	1 20
7-inch	....." "	1 35
Polished, 15c. per dozen extra." "	

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western	.....70 and 10 per cent.
Arcade	.....70 " 10 "
Kearney & Foot	.....70 " 10 "
Disston's	.....70 " 10 "
American	.....70 " 10 "
J. Barton Smith	.....70 " 10 "
McClellan	.....70 " 10 "
Eagle	.....70 " 10 "
Nicholson, 60 and 10 to 60, 10 and 5" "
Royal	.....80 " 75 "
Globe	.....70 to 75 "
Black Diamond, 60 and 10 to 60, 10 and 5 per cent." "
Jowitt's, English list, 25 to 27½ per cent." "
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50" "

GLASS.

Window. Box Price.

Size United Inches.	Star 50 ft.	Per 100 ft.	D. Diamond 50 ft.	Per 100 ft.
Under 26	3 80	.....	5 06
26 to 40	4 00	.....	5 44
41 to 50	4 50	.....	6 56
51 to 60	4 75	.....	7 50
61 to 70	5 00	.....	8 62
71 to 80	5 30	.....	9 38
81 to 85	10 75
86 to 90	12 30
91 to 95	15 00
96 to 100	18 00
Discount 15 per cent.

GAUGES.

Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33each 1 65 2 40
GILLET'S POWDERED LYE.
1-case, \$3.60; 3-case, \$3.50; 5-case and over, \$3.40.

HALTERS.

Rope, ½-inch	.....per gross	12 00
Rope, ¾-inch	....." "	9 00
Rope, 1-inch	....." "	14 00
Leather, 1-inch	.....per doz.	4 00
Leather, 1½	....." "	5 20
Web	....." "	2 45

HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

TACK.

Magneticper doz. 1 10 1 20

SLEDGE.

Canadianper lb. 0 07½ 0 08½

Ball Peen.

English and Canadian, per lb. 0 22 0 25

HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00

Sore door,per doz. 1 00 1 50

FORK.

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

Americanper doz. 1 00 1 25

Plane.

Americanper gross 3 15 3 75

Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

Steel barn doordoz. pairs. 8 00 10 00

Stearns, 4-inchdoz. pairs. 4 50

" 5-inchdoz. pairs. 6 00

Zenithdoz. pairs. 9 00

Lane's covereddoz. pairs. 8 40

No. 11, 5-foot rundoz. pairs. 10 80

No. 12, 10-foot rundoz. pairs. 12 60

No. 14, 15-foot rundoz. pairs. 21 00

Steel, covereddoz. pairs. 4 00 11 00

" track, 1 x 3-16 in(100 ft)doz. pairs. 3 75

" " 1½ x 3-16 in(100 ft)doz. pairs. 4 75

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.

Shingle, Red Ridge 1, per doz. 4 40

" 2,doz. 4 85

Barrel, Underhilldoz. 5 00

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½

" " 5-in.,doz. 0 08½

" " 6-in.,doz. 0 06

" " 8-in.,doz. 0 05½

" " 10-in.,doz. 0 05½

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in.per 100 lb. 4 50

12 in. up.doz. 3 25

Spring, No. 20, per gro. pairsdoz. 10 50

HOES.

Garden, Mortar, etc., discount 60 per cent.

Planterper doz. 4 00 4 50

HOLLOW WARE.

Tinned cast, 35 per cent.

HOOKS.

Cast Iron.

Bird cageper doz. 0 50 1 10

Clothes line, No. 61	....." "	0 00 0 70
Harness	....." "	0 60 12 00
Hat and coat	.....per gro.	1 10 10 00
Chandelier	.....per doz.	0 50 1 00

Wrought hooks and staples Canadian discount 60 per cent.

Hat and coat, discount 60 per cent.
Beltper 1,000 0 60
Screw, bright, discount 60 per cent.

HORSE NAILS.

"C" brand, 40, 10 and 7½ per cent. off list (Oval head)

"M" brand, 55, per cent.

Countersunk, 57½ per cent.

"Monarch," 50 and 7½ per cent.

"Peerless" 50 per cent. dis.

HORSESHOES.

F.O.B. Montreal

Iron Shoes.

Light, medium and heavy 3 65 3 90

Snow shoes 3 90 4 15

Steel Shoes.

XL, sizes 1 to 5 5 35

Light, No. 2 and larger 3 90

No. 1 and smaller 4 05

Featherweight, all sizes 0 to 4 5 35

Toeweight, all sizes 1 to 4 6 60

JAPANNED WARE.

Discount 50 per cent.

ICE PICKS.

Starper doz. 00 3 25

KETTLES.

Brass spun 7½ per cent. discount off new list.

Copperper lb. 0 30 0 50

American, 60 and 10 to 65 and 5 per cent.

KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,

Americanper gross 0 60

KNOBBS.

Door, japanned and N.P., per

doz. 1 50 2 50

Bronze, Berlinper doz. 2 75 3 25

Bronze, Genuinedoz. 6 00 9 00

Shutter, porcelain, F. & L.

screwper gross 1 30 00

White door knobsper doz. 2 00

HAY KNIVES.

Net prices.

LAMP WICKS.

Discount, 60 per cent.

LANTERNS.

Cold Blastper doz. 7 00

No. 3, "Wright"doz. 8 50

Ordinary, with O burnerdoz. 4 00

Dashboard, cold blastdoz. 9 00

No. 0doz. 5 75

Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.

Porcelain linedper doz. 2 20 5 60

Galvanizeddoz. 1 87 3 85

King, wooddoz. 2 75 2 98

King, glassdoz. 4 00 4 50

All glassdoz. 0 50 0 90

LINE.

Fishper gross 1 05 2 50

Chalkdoz. 1 90 7 40

LAWN MOWERS.

Woodyatt, 10½-in. wheel, 14-in. cut 8 50

Star, 9-in. "doz. 7 00

Daisy, 8-in. "doz. 2 87½

Philadelphia, 7½-in. "doz. 7 00

Ontario, 7½-in. "doz. 15 80

King Edw'd, 12-in. "doz. 9 50

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:

10½-in. high wheel 7 50 10 00

9-in. "doz. 5 50 6 25

8-in. "doz. 4 90 5 50

LOCKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwinper doz.

Cabinet.

Eagle, discount 30 per cent.

Padlocks.

English and Am.per doz. 0 50 6 00

Eagle, discount 30 to 25 per cent.

MACHINE SCREWS.

Iron and Brass.

Flat head, discount 25 per cent.

Round head, discount 20 per cent.

MALLETS.

Tinsmiths'per doz. 1 25 1 50

Carpenters', hickory, "doz. 1 25 3 75

Lignum Vitaedoz. 3 85 5 00

Caulking, eachdoz. 0 60 2 00

MATTOCKS.

Canadianper doz. 5 50 6 00

MEAT CUTTERS.

American, discount 3½ per cent.

German, 15 per cen

Gemeach 1 15

MILK CAN TRIMMING.

Discount 25 per cent.

NAILS.

2d and 3dper doz. 3 30 3 45

3ddoz. 2 95 3 12

4 and 5ddoz. 2 70 2 95

6 and 7ddoz. 2 60 2 80

8 and 9ddoz. 2 45 2 60

Remington Raises Records

The new C.E.O. Trap Gun established the five-man squad world's records—1454-1500 clay targets, 97 per cent., in three consecutive days.

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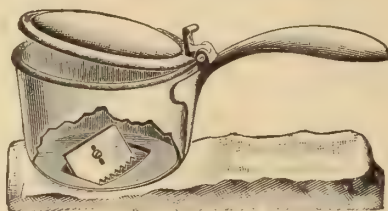
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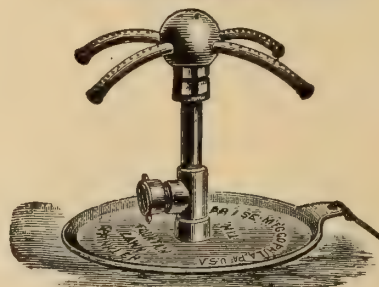
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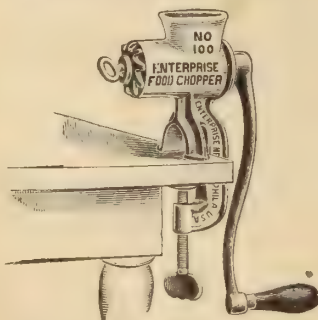
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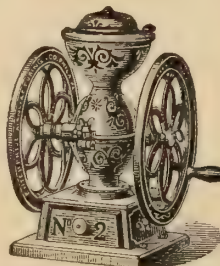
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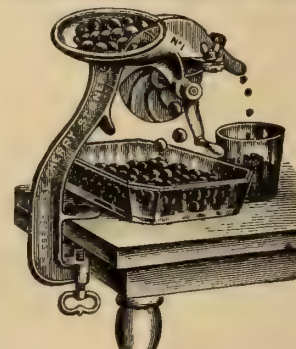
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Cutlery—Razors, Scissors, etc.

Birkett, Thos., & Son Co., Ottawa.
 Boker, Henry, Montreal.
 Butler, Geo., & Co., Sheffield, Eng.
 Heinisch, R., Sons Co., Newark, N.J.
 Lamplough, F. W., & Co., Montreal.
 Silberstein, A. L., New York.
 Smith & Hemenway Co., New York.
 Walter, E. F., & Co., Montreal.
 Wiebusch & Hilger, New York.

Educational.

Belleville Business College, Belleville.
 Canadian Coll. College, Toronto.
 St. Margaret's College, Toronto.
 Willis Business College, Ottawa, Ont.
 Western Business College, Toronto.

Electric Fixtures.

Morrison James, Mfg. Co., Toronto.
 Munderloh & Co., Montreal.

Electro-Plating.

Sutherland, D., Toronto.

Engravers.

Legg Bros., Toronto.
 Smith, Geo. J., New York.

Files and Rasps.

Barnett Co., G. & H., Philadelphia, Pa.
 Grose, Walter, Montreal.

Financial Institutions.

Bradstreet Co.
 British America Assurance Co., Toronto.
 Canadian Bank of Commerce, Toronto.
 Confederation Life Ass., Toronto.
 Liverpool & London & Globe Ins. Co.,
 Toronto.
 London Guarantee and Accident Ins.
 Co., Toronto.
 Metropolitan Bank, Toronto.
 Western Assurance Co., Toronto.

Firearms and Ammunition.

Abbey Improved Chilled Shot Co., New-
 castle-on-Tyne, Eng.
 Hamilton Rifle Co., Plymouth, Mich.
 Harrington & Richardson Arms Co.,
 Worcester, Mass.
 Iver Johnson's Arms and Cycle Works,
 Fitchburg, Mass.
 Remington Arms Co., Ilion, N.Y.
 Union Metallic Cartridge Co., Bridge-
 port, Conn.
 Walter, E. F., & Co., Montreal.

Flat Irons.

Ives, H. R., Co., Montreal.

Food Choppers.

Enterprise Mfg. Co., Philadelphia, Pa.
 Lamplough, F. W., & Co., Montreal.
 Russell & Erwin Mfg. Co., New Britain,
 Conn.
 Smith & Hemenway Co., New York.

Gas Lamps and Sundries.

Auer Light Co., Montreal.
 International Gas Appliance Co., Toronto

Glaziers' Diamonds.

Sharratt & Newth, London, Eng.
 Shaw, A., & Son, London, Eng.

Glue.

Grove Chemical Co., Lancashire, Eng.

Gold Enamel.

Ridout, Geo., & Co., Toronto.

Hardware Specialties.

Erie Specialty Co., Erie, Pa.

Horseshoe Pads.

Canadian Rubber Co., Montreal.

Horseshoes and Nails.

Canada Horse Nail Co., Montreal.

Peck Rolling Mills, Montreal.

Ice Cutting Tools.

Erie Specialty Co., Erie, Pa.

North Bros. Mfg. Co., Philadelphia, Pa.

Injectors—Automatic.

Penberthy Injector Co., Windsor, Ont.

Iron Pipe.

Page-Hersey Iron and Tube Co., Guelph.

Iron Pumps.

McDougall, R., Co., Galt, Ont.

Keys.

Millen, John & Son, Montreal.

Lanterns.

Ontario Lantern Co., Hamilton, Ont.

Wright, E. T., & Co., Hamilton.

Lawn Mowers.

Bowman, John, Hardware and Coal Co.,
 London, Ont.

Maxwell, David, & Sons, St. Marys Ont.

Taylor-Forbes Co., Guelph, Ont.

Ledgers and Office Stationery.

Briggs Ledger System Co., Toronto.

Hart & Riddell, Toronto.

Weese, G. A. & Son, Toronto.

Lumbermen's Supplies.

Birkett, Thos., & Son Co., Ottawa.

Warnock, Jas., & Co., Galt.

Lye.

Gillet, E. W., Co., Limited, Toronto.

Machinery.

Canada Foundry Co., Toronto.
 Fairbanks Co., Montreal and Toronto.
 Globe Brass Works, Detroit.
 Jardine, A. B., & Co., Hespeler, Ont.
 Kerr Engine Co., Walkerville, Ont.
 Morrow Machine Screw Co., Ingersoll, Ont.
 Ontario Wind Engine and Pump Co.,
 Toronto.
 Penberthy Injector Co., Windsor.

Mantels.

Batty Stove and Hardware Co., Toronto.

Manufacturers' Agents.

Gibb, Alexander, Montreal.
 Philip, David, Winnipeg.

Metals.

Booth Copper Co., Toronto.
 Canada Iron Furnace Co., Midland, Ont.
 Canada Metal Co., Toronto.
 Deseronto Iron Co., Deseronto, Ont.
 Gibb, Alexander, Montreal.
 Hankin, F., Montreal.
 Ironside, Son & Co., London, Eng.
 Jackson, C. F., & Co., Vancouver, B.C.
 Kemp Mfg. Co., Toronto.
 Leslie, A. C., & Co., Montreal.
 London Rolling Mills Co., London, Ont.
 Lysaght, John, Bristol, Eng.
 Morton, B. K., & Co., Sheffield, Eng.
 Nova Scotia Steel and Coal Co., New
 Glasgow, N.S.
 Peck Rolling Mills, Montreal.
 Rogers, Henry, Sons & Co., Montreal.
 Samuel, Benjamin & Co., Toronto.
 Thompson, B. & S. H. & Co., Montreal.

Metal Lath.

Metallic Roofing Co., Toronto.

Pedlar People, Oshawa, Ont.

Metal Polish, Emery Cloth, etc.

Falkner, H. F., Toronto.

Oakey, John, & Sons, London, Eng.

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Kemp Mfg. Co., Toronto.

McClary Mfg. Co., London, Ont.

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Davidson Mfg. Co., Brooklyn, N.Y.

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Berry Bros., Detroit and Wallaceburg.
 Canada Paint Co., Montreal.
 Canadian Oil Co., Toronto.
 Consolidated Plate Glass Co., Toronto.
 Dods, P. D., & Co., Montreal.
 Francis-Frost Co., Toronto.
 Henderson & Potts, Montreal and
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Wright, E. T., & Co., Hamilton.

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Jenking, A. C., Montreal.

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Paterson Mfg. Co., Toronto & Montreal.

Taylor-Forbes Co., Guelph, Ont.

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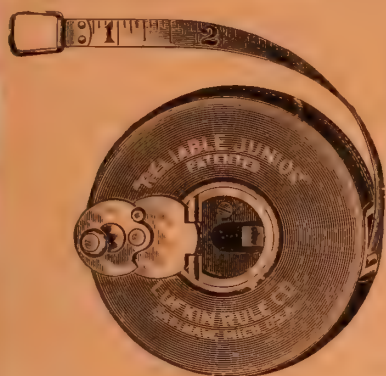
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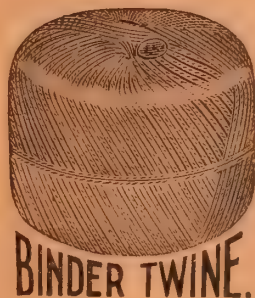
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VOL. XVI.

MONTREAL AND TORONTO, JULY 9, 1904.

NO. 28

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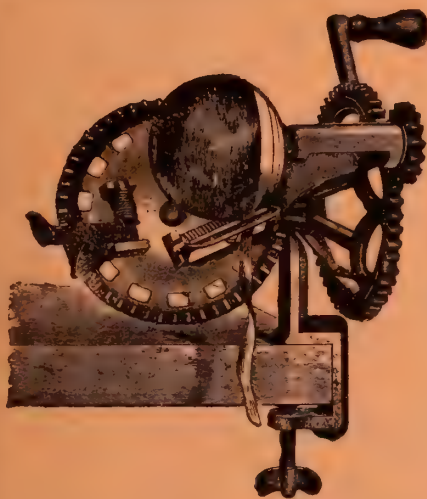
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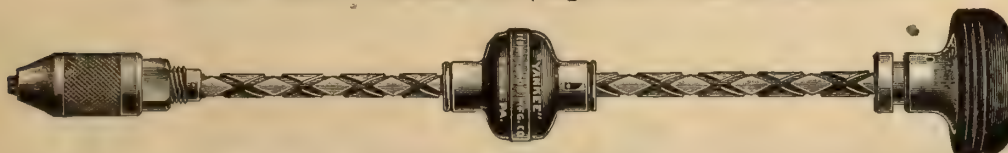
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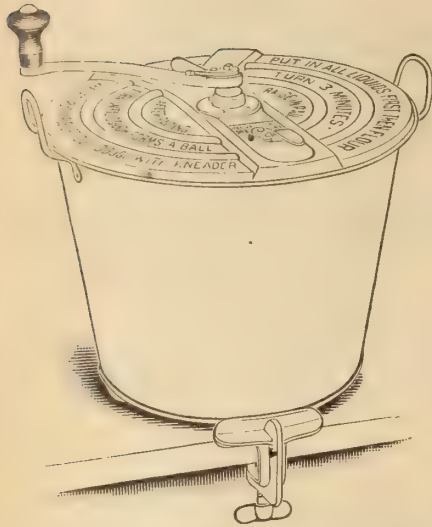
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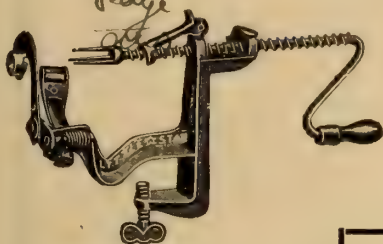


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Cut Book 20

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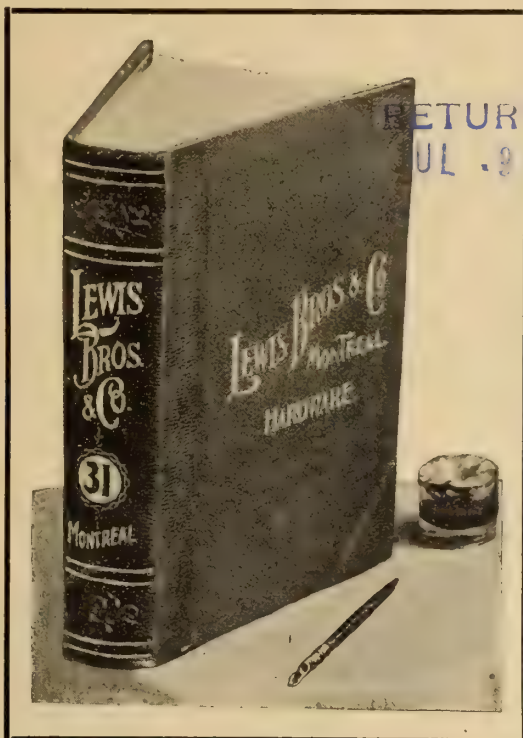
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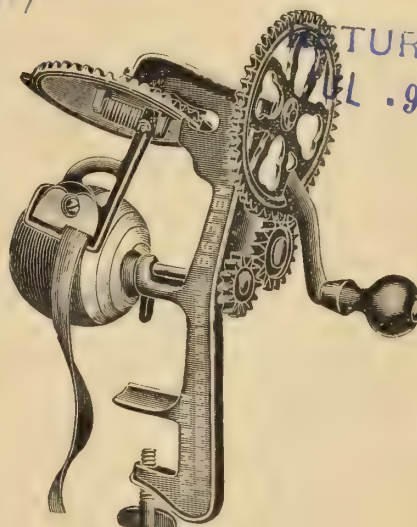


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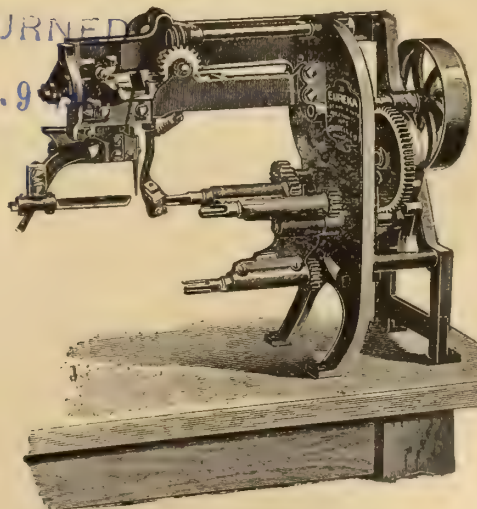
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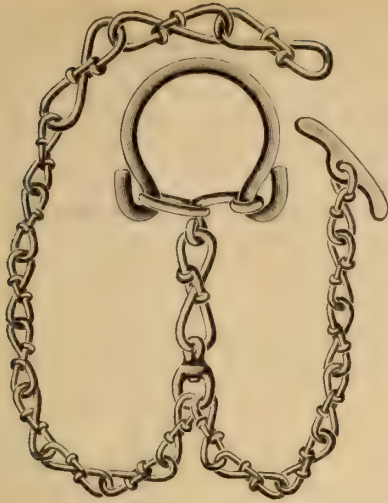
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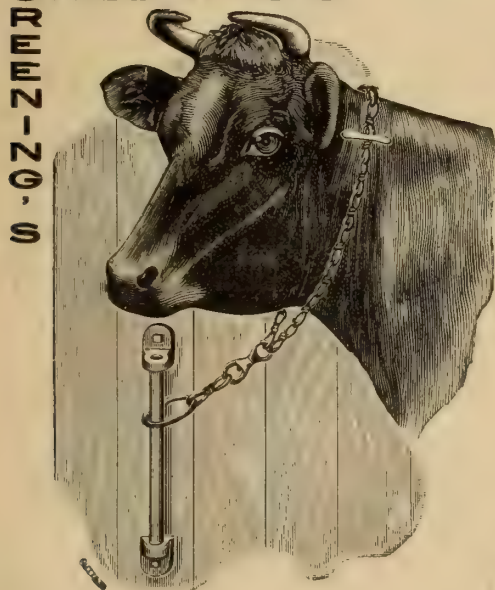
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PATENT COW TIES.

These Cow Ties
have stood the
test for years.
Undoubtedly the
best and strong-
est on the mar-
ket.

It will pay to handle only the best.

A complete line of all sizes ready for shipment.

For Sale by all Jobbers.

THE B. GREENING WIRE CO.,
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Hamilton, Ont.

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STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

WOOD SCREWS,

BRIGHT WIRE GOODS,
WIRE STAPLES.

WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
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TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO.

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SHOT.

In ordering, please specify **The Abbey Improved Chilled Shot Co., Ltd., Newcastle-on-Tyne.**

N.B. We also make Hard and Soft Shot but strongly recommend Improved Chilled Shot for penetration.

N.B.—The only Company in Great Britain devoting its whole time to Shot making

ONTARIO SILVER CO.,

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NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and ELECTRO PLATE.**

Ask for our Catalogue and Quotations.

**Dundas Axe Works**

DUNDAS, CANADA.

Write for Prices

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For Manufacturers of
MACHINERY and METALWARE

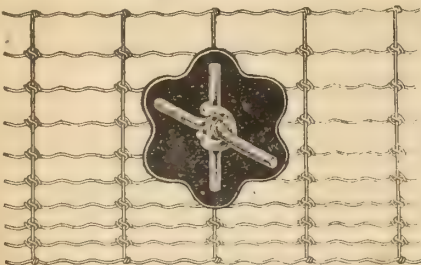
All our work is guaranteed to be satisfactory.

THE PARSONS-IRONS CO.

58 Adelaide St. W., - TORONTO.

Your Customers

the farmers are looking for a fence, strong, serviceable and durable at a reasonable cost. You can supply it to them in the

IDEAL

It is strictly up-to-date and the best value to be had in wire fencing to-day.

A GOOD SELLER

We have a style for every purpose in either heavy or light fencing. Write for catalogue showing fencing and gates.

Coiled-Spring Wire

unexcelled in quality, shipped promptly

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McFiegor-Banwell Fence Co.

Limited

Walkerville, Ont.

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Sole Agents for Manitoba and N. W. T.



This design a guarantee of quality

Manilla Paper

SMOOTH, TOUGH, BRIGHT, CLEAN
ALL SIZES AND WEIGHTS

Samples and
Prices
gladly sent.

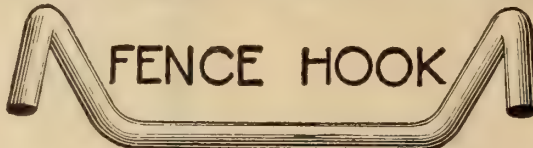
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THE TOUGHEST OF THE TOUGH
ALMOST WATERPROOF

CANADA PAPER CO.
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GALVANIZED FENCE HOOK

FOR FASTENING WOODEN PICKET ON WIRE
FENCES



WIRE NAILS, COILED SPRING,
BARB and PLAIN FENCE WIRE,
OILED and ANNEALED, CLOTHES
LINE WIRE, STAPLES, etc.

THE WESTERN WIRE & NAIL CO., Limited,

LONDON, ONT.



"Little Shaver"

Canadian Agents:

E. H. GRENFELL & CO.
LONDON, ONT.

Cutest Thing in the Kitchen

Shaves chocolate so thin that it dissolves without stirring.
Slices Potatoes, Radishes, Cucumbers, Onions, Apples and
all the smaller fruits and vegetables.
Made of black walnut.
Knife is fine tempered steel.

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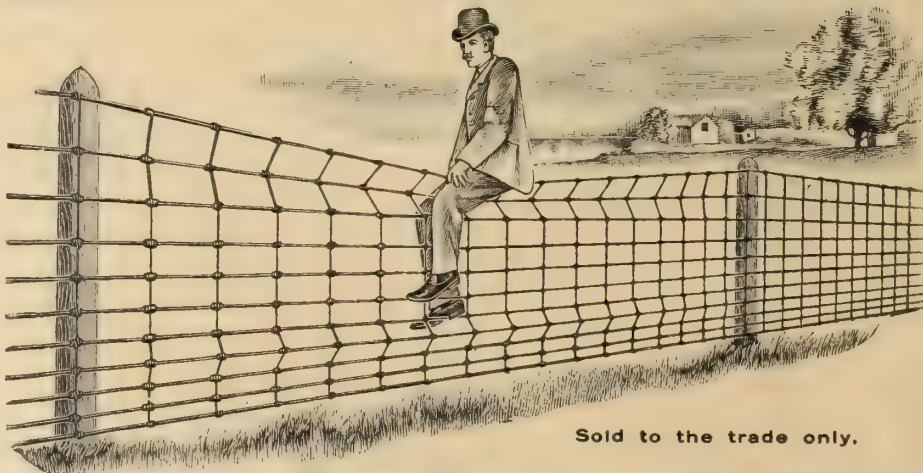
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THE HINGE IS COMPLETE, AND
WORKS WITH THE UTMOST
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Sold to the trade only.

CAVERHILL, LEARMONT & CO., Agents
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Manufactured and sold by
OWEN SOUND WIRE FENCE CO., Limited
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SILVERSMITHS and MANUFACTURERS
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of every description.



No. 205.—Sterling Silver Tea Set Embossed.

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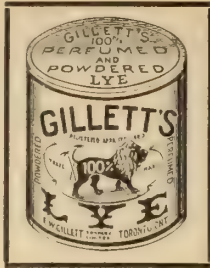
See our New Designs before placing your orders elsewhere,
If you do not you will probably be very much disappointed.

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Factories and Salesrooms:

West King St., - TORONTO, CANADA.

E. G. GOODERHAM, - MANAGING DIRECTOR.



GILLETT'S LYE

—IS GOOD FOR—

**Disinfecting Sinks, Closets,
Drains, Etc.**

Outdoor closets can be kept in perfect sanitary condition. If sufficient Lye is used closets of this kind need never be cleaned,—the Lye consumes everything. As the article is cheap, it should be used freely.

Sell Gillett's Lye for

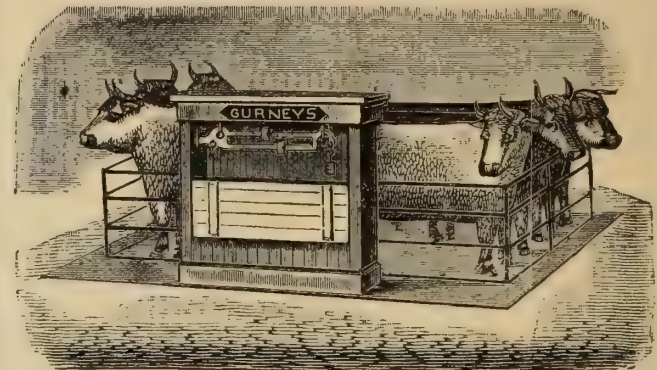
Sinks, Closets, Drains, Etc.

**E. W. GILLETT COMPANY LIMITED
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THE GURNEY STANDARD SCALES

Absolutely Accurate and Reliable. The Best of Material and Workmanship. Recognized throughout Canada as

"THE STANDARD"



We make scales of every description. Established 1856.
Send for catalogue and printed matter.

The Gurney Scale Co., Hamilton, Ont.

Eastern Warehouse :

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SEASONABLE GOODS for PRESERVING TIME.

KEMP'S ENAMELEDWARE

Manufactured in the THREE POPULAR GRADES.

DIAMOND **PEARL** **GRANITE**



How is your stock ?

It should be very complete at this season.

We can supply your requirements promptly on receipt of order.

We use the utmost care in handling our goods and you can therefore depend on A1 quality.

A full stock of metals always carried in stock, such as Galvanized Iron, Canada Plate, Tinplate, etc., etc.

KEMP MANUFACTURING CO., TORONTO, CAN.

THE CLERK WHO HOPES TO BE A PARTNER

A Personal
Talk by
The Editor

WHEN we offered, in last week's issue, a year's subscription for Hardware and Metal to the clerk who should send us the best suggestion for the improvement of the paper, we expected that some of the clerks who read the paper would be sufficiently interested to send us suggestions.

We are gratified to learn that this opinion was well founded. The letter published herewith is an indication of the enterprising spirit that animates many of the young men connected with the hardware and kindred trades in Canada, and is worthy of the attention of hardware retailers, as well as of clerks in all parts of the country. We can assure the writer, and those who may have thought what he has given expression to, that we will take the suggestion, and in good faith will act upon it as far as practicable.

Unquestionably there are in all parts of the Dominion young men full of enterprise and ambition, desirous that some day they shall be admitted into partnership with their employers, or be in a position to start in business for themselves. Under the control of these men will be the hardware stores of the next generation. On them will rest the burden and responsibility which must always be borne in any business in which competition enters so widely, and in which technical knowledge is of such importance.

What stamp of men will these be? This question is one that every retailer and every clerk should put to himself. In many cases a little heart searching along this direction will convince many employers that they are not doing as much for their clerks as they should,

in their own interest, as well as that of the clerks. At the same time, many clerks may realize that the criticism in the letter applies to them in a degree that calls for their attention and for a remedy.

What should be the attitude of the hardware merchant regarding the reading of Hardware and Metal by his clerks. Our correspondent makes the point that the clerks should have every

the expansion of the business that has animated his own efforts. To that end he should put in their hands everything that will give them a wider knowledge of, or deeper interest in, their business. A trade paper like Hardware and Metal must surely be included in this class, and it should be made a duty, as well as an opportunity, that the clerks should study its columns from week to week.

On the other hand, what should be the clerk's attitude to the trade paper and his employer? Primarily, he must recognize that in turning over the paper to him, his employer is taking him into his confidence. The prices, discounts, etc., are not published for the benefit of the general public, but for the use of the trader and the clerk who has access to these figures should treat them as a confidence, just as he should other matters in connection with the firm's undertakings. Some retailers refuse to allow their clerks to read the paper because they do not feel sure that it would be safe to trust them with these figures. It is a fact, however, that a clerk who cannot be depended on to treat such a matter as confidential is not worthy of a position in a hardware store.

The clerk who cannot inspire the confidence of his employer should make a change, for he can never under such conditions attain to any position of real responsibility or usefulness.

If, however, the clerk possesses the confidence of his employer, he should recognize that this lays upon him obligations not only for the present, but for all time to come. He must be ever alert to serve the best interests of his employer, while in his service, and in case of any severance of the connection, he

A CLERK'S SUGGESTIONS.

Editor HARDWARE AND METAL:

Having seen your liberal offer in this week's issue of one year's subscription to your paper for the best suggestion for the improvement of HARDWARE AND METAL, I will submit one.

I have for a long time thought that if you could exert an influence over the employers so that they would induce their clerks to read HARDWARE AND METAL it would not only assist the clerk, but also the firm materially.

Then, when the clerks do read the paper, put examples before them of some poor boy starting at the bottom, and with steady perseverance reaching the top.

I have noticed that many clerks think only of how to put in their time. They never improve their own financial standing much less their employers'.

I think such stories would give ambition to many. I know they do to myself.

I anxiously wait for HARDWARE AND METAL each week, for I think it an excellent help and guide to clerks.

R. F. B.

Brantford, July 4, 1904.

opportunity to read the paper, for the reasons that it would (a) inspire and (b) instruct them. Now this is a strong argument in simple language, and we feel that ninety-five out of a hundred retailers will admit the point made.

The merchant should endeavor to gather around him a staff of young men who are fired by the same enthusiasm in their work, the same zeal for

should hold as a trust any business secrets which have been given him. To talk about such matters after leaving a firm is not merely a discourtesy, but a serious breach of trust.

One of the obligations laid upon a clerk who is trusted with responsibility, and who is helped to larger usefulness by an employer, is that he will try in every way to equip himself with the knowledge necessary to a thorough knowledge of anything he is given to do. If he is given the privilege of reading the trade paper and to study the catalogues received by the firm, he should make the most of the opportunity for growth and progress in the business thus provided. And all (not a part, but the whole) of this added knowledge and ability should be cheerfully placed at the service of the employer, who has helped the clerk to obtain it. The clerk may depend, in ninety-nine cases out of a hundred, that as his usefulness increases so will his share of the revenues of the firm.

If a clerk has received the encouragement and sympathy of his employer in his quest for knowledge, he is under another obligation, which is sometimes lost sight of in this self-seeking world. He is under obligations not to, as long as he is fairly treated, turn his energies, his trained experience, against the employer who has helped him to be what he is.

It is a reasonable and praiseworthy ambition on the part of a clerk to want to get into business for himself. His energies should, however, be directed toward admission into the firm as a partner, rather than to start as a rival of his friend and employer. The formation of such a partnership has been the best possible thing that could happen to scores, even hundreds, of firms. The young partner has by his enthusiasm, by his aptitude to modern ideas, by his capacity for work, galvanized and re-invigorated the entire concern, while the experience and conversatism of the older partnership has prevented experiments likely to be unprofitable, if not embarrassing. In all probability, too,

the young partner is not equipped with much capital, but as the firm he enters has a fair capital and ample credit, they are in a position to adopt anything likely to extend and increase the revenue of the concern.

So much for the relations between employer and clerk; how about the relations between the clerk and the trade paper? We recognize that if the clerk is to read the paper from week to week we should keep him in mind in the preparation of our articles. We will do so in the future, even more than we have done in the past. Confidentially we may tell our friends among the clerks that we have now ready for publication several stories of business men, which we think will be inspiring, as well as instructive.

Now, how about the clerks? Last week we offered a year's subscription to the clerk sending us the best suggestion. We take pleasure in presenting the same to the writer of the letter we publish. We also offered to pay for articles and photographs. We have not yet received any of these. Now, boys, get a hustle on. We want to publish the good things, for the other fellows as well as for yourself.

D.O.M.

MANUFACTURERS MEET.

THE annual meeting of the Nova Scotia branch of the Canadian Manufacturers' Association was held in Halifax recently. Mr. J. R. Henderson, chairman of the branch association, presided. In the opening address he outlined the work the association had done during the year. Mr. R. J. Younge, secretary of the Canadian Manufacturers' Association, gave a stirring address, dealing with the closer bond of union which was gradually being formed between the branch association and the general association. He also dealt with the work of the general association.

The following new officers were elected: President, Alfred Dickie, Stewiake; vice-president, W. J. Clayton, Halifax; executive, Nelson B. Smith, F. J. Ward, J. R. Henderson, T. M. Cutler, G. S. Troop, Halifax; C. J. Sillicker, A. F. Pelton, Amherst; Harvey Graham, New Glasgow; H. L. Hewson, Amherst; H. H. Hamilton, Pietou; J. P. Longard, Halifax; Ernest Hill, Dartmouth; W. B. Taylor, Halifax; Jas. Munro, New Glasgow; Alex. McNeil, Halifax.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Core Machine.

THE Falls Rivet & Machine Co., Cuyahoga Falls, O., are sending out a catalogue illustrating and describing the Wadsworth Core Machine. In this catalogue the value of a core-making machine is well brought out. This catalogue will be furnished to readers of *Hardware and Metal* upon application to the manufacturing firm.

Kristofer Polhem.

Wyman & Gordon, manufacturers of all kinds of drop forgings, Worcester, Mass., and Cleveland, O., have a rather unique way of keeping in touch with their customers. Each month they publish a short story of some famous engineer in booklet form, for distribution. In the booklet is enclosed a two-leaf circular touching on some line of drop forgings turned out by the firm. The booklet for June contains a short story of the life of Kristofer Polhem, a renowned Swedish engineer, of several centuries ago. The circular is devoted to crank forgings.

Engines and Boilers.

Hardware and Metal has received from the James Leffel Co., Springfield, O., Catalogue M of their engines and boilers. This is a handsome catalogue, the illustrations and the typographical execution being of the best. The engines and boilers are described and illustrated in detail, which are both interesting and instructive. Readers of *Hardware and Metal* wishing to secure a copy of this catalogue should apply to the James Leffel Co., mentioning this paper.

Friction Clutches.

The Carlyle Johnston Machine Co., Hartford, Conn., are sending out a

WIRE NAILS TACKS WIRE

Prompt Shipments

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

small booklet illustrating and describing their friction clutches. Here are some of their claims for the clutches—they are small, simple, powerful, and operate easily and quickly; they have but few parts, which are all interchangeable; there are no bolts, nuts or links to become loose; one screw adjusts to any desired tension; the working parts are entirely covered, and are thus kept free from dust.

Planers and Shapers.

Hardware and Metal has received from the London Machine Tool Co., London, Ont., their catalogue on planers and shapers. This catalogue is attractive from all points of view, the illustrations being good and the style of type used remarkably clear. A description of the detail construction is given, and also directions for erecting planers. Then follow the illustrations and specifications of the different styles of planers and milling machines. Readers of Hardware and Metal wishing to secure one of these catalogues should apply to the London Machine Tool Co., mentioning this paper.

Magnolia Metal.

The Magnolia Metal Co. have just issued a neat hand-book describing Magnolia metal, and the many circumstances in which it may be used to advantage. This hand-book contains much useful information for engineers, as well as for mechanics who do the pouring. Photographs of the officials, and of the different officers of the company, as well as of the factory where the metal is made, are shown. Reasons are given why this is a superior metal, and records of complete tests and comparisons with other metals are made. Complete directions for using the metal are given, as well as information as to the method of soldering Magnolia metal to case iron, brass, etc. This is a handy little book, and anyone using babitt metal would do well to have a copy of it. It may be had from their Montreal office by mentioning Hardware and Metal.

Patent Mica Roofing.

Some builders, and even some hardware dealers, have not yet fully realized the value of mica roofing for buildings. The Hamilton Mica Roofing Co., Hamilton, Ont., has a patent roofing which they state is cheaper than shingles, yet is both waterproof and fireproof. It is suitable for any building and can be laid by ordinary workmen. A neat booklet giving information about this roofing and showing how it should be laid will be sent to any readers of Hardware and Metal.

Diamond Flint Glass Co.

The Diamond Flint Glass Co., Montreal and Toronto, have issued a new



How's your Paris Green stock?

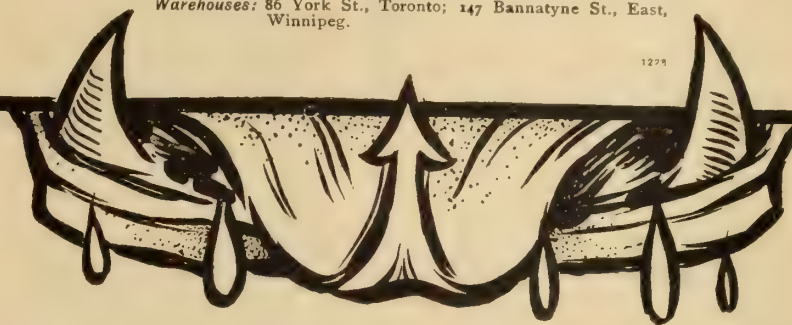
Be sure you have enough to carry you through the season—don't let it run low—you're likely to lose sales.

Mail us a "fill-in order" today. We'll make quick deliveries. We carry a full stock of *Berger's Paris Green* in all sized packages at our Toronto warehouse and can ship promptly from that point or from Montreal.



THE SHERWIN-WILLIAMS CO., PAINT AND VARNISH MAKERS.

Canadian Headquarters and Plant: 21 St. Antoine St., Montreal.
Warehouses: 86 York St., Toronto; 147 Bannatyne St., East, Winnipeg.



price list and catalogue of lamp chimneys. In it special attention is directed to the "Vulcan Best Lead" and the "Crown" flint glass, oil finish. As the productions of this firm are now standard brands in the trade, every hardwareman in Canada should secure a copy of this work. It will be sent on application to any readers of this paper who have not yet secured a copy.

High Grade Carriages.

The Wm. Gray & Sons Co., Chatham, Ont., have a comprehensive catalogue showing the large ranges of traps, wagons, phaetons, surreys, buggies, runabouts, carts, delivery wagons, etc., manufactured by that firm. Included among the engravings are one of the works and one of the diploma won at the Dominion Exhibition at Toronto last year. The catalogue, though not "made in Canada," is one that every hardwareman who handles vehicles or parts therefor, or who wants a delivery wagon, should have on hand.

Hardware and Metal is in receipt of the following bulletins issued by the R. E. T. Pringle Co., Montreal, any or all

of which will be sent upon application and mentioning this paper: "Porcelain Cleats, Split Knobs and Leather Nail Heads;" "Non-Arching Enclosed Fuses, Alpha Standard Cut-outs and Rosettes;" "Secondary Generator;" "Flush Plug and Flush Receptacle;" "Knife Switches;" and "Porcelain Tubes."

Graphite as a Lubricant.

This is the title of a little book published by the Joseph Dixon Crucible Co., of Jersey City, N. J., which contains considerable information regarding friction and lubrication. Besides an interesting account of friction scientifically explained, and the requirements of a good lubricant, it puts forth the value of flake graphite for lubricating purposes. For stationary engines and pumps, marine engines, gas engines, cylinders, air compressors, locomotives, etc., graphite lubrication is all important. If any of the readers of Hardware and Metal are troubled with hot bearings, scored cylinders, laboring valves, or any of the difficulties arising from imperfect lubrication, they may obtain a free sample of flake graphite and the booklet by communicating with the above firm, mentioning this paper.

Business Changes

ONTARIO.

THE assets of Modeste Laviolette, general merchant, Clarence Creek, are to be sold at auction on July 11.

S. A. Wabb & Co., general merchants, French River, are offering to compromise.

A. S. Russell, general merchant, Gal-etta, has been succeeded by J. W. Bean.

Williams Bros., general merchants and butchers, Havelock, have been burned out.

Barchard & Co., manufacturers of wooden boxes, Toronto, suffered loss by fire; insured.

QUEBEC.

J. A. Lamoureux, general merchant, Stanbridge Station, is dead.

F. Garneau, general merchant, Rigaud, is offering 35c on the dollar.

The assets of Bigonnesse & Sequin, general merchants, Labelle, have been sold.

Alfred Doré has registered under style of S. Dore & Cie., contractors, Montreal.

The assets of H. Rondeau, general merchant, St. Norbert, Berthier, are to be sold.

The assets of Cardinal & Bedard, grocers, Quebec, were advertised to be sold on July 7.

L. P. Pelletier, general merchant, Notre Dame Du Lac, has assigned to V. E. Paradis.

The assets of Keegan & Brunet, brick manufacturers, Montreal, were offered for sale July 4.

Alderic Guilbault & Francois Prouix have registered under style of Guilbault & Prouix, contractors, Montreal.

Philippe Lambert, Jr., has registered under the style of P. Lambert & Cie., sash and door manufacturers, St. Cyrille De Wendover.

Maheu & Dorais, general merchants, Arthabaskaville, have dissolved partnership; the business is continued under the style of Maheu, Dorais & Cie.

NEW BRUNSWICK.

Paul Michaud, tinsmith, St. Leonard's, has closed business.

B. Richard, general merchant, McLeod's Mills, has sold out to A. Richard.

The premises of H. Humphrey, general merchant, Cambridge, have been destroyed by fire.

IVER JOHNSON • AUTOMATIC • REVOLVERS



THEY PROTECT

DEALERS who buy them PROTECT their profits.
USERS who buy them PROTECT their lives and property.

Our extensive advertising insures a permanent demand and our reputation insures the best quality, which protects the dealer.

Our exclusive and patented safety mechanism used only on Iver Johnson Automatic Revolvers makes them **absolutely safe** and **accidental discharge impossible**, which protects the life of the user.

Send for our fire arms literature, mailed upon application.

IVER JOHNSON'S ARMS and CYCLE WORKS

NEW YORK OFFICE.

No 99 Chambers Street.

Fitchburg, Mass.

PRINCE EDWARD ISLAND.

K. Sharpell, general merchant, Portage, is asking for an extension.

T. Mickham & Co., general merchant, Souris West, have dissolved partnership. T. Mickham continues under old style.

MANITOBA AND N.W.T.

G. Betts, general merchant, Yorkton, is retiring from business.

R. C. Bauer, general merchant, etc., Wetaskiwin, has assigned.

T. Watson, blacksmith, Moose Jaw, has sold out to W. Clarke.

S. A. Kredba, general merchant, Wapella, has opened at Esterhazy.

S. Chipperfield, general merchant, Chickney, is moving to Abernethy.

Cook & Son, general merchants, Bentley, have sold to C. Putland; possession Sept. 1.

A meeting of the creditors of P. H. Sutherland, general merchant, Selkirk West, has been held.

Franzes Wieb, contractor, Winnipeg, has assigned to R. W. McClure. A meeting of creditors has been called.

BRITISH COLUMBIA.

Wilson & Reid, contractors, Vancouver, have dissolved partnership.

A receiver is in charge of the Victoria business of the Albion Iron Works Co., Limited, Victoria and Vancouver.

BANQUET POSTPONED.

The Manufacturers' Association had originally intended to tender a banquet to Geo. E. Drummond, president of that body, and also president of the Board of Trade, on Dominion Day. This has been postponed until July 21, and will be held at the handsome new quarters of the Canada Club, in the Board of Trade Building, Montreal. A unique feature of the occasion will be the presentation of a memorial to Cyrus A. Birge, of Hamilton, formerly president of the association.

BOARD OF TRADE.

At a recent meeting of the Hamilton Board of Trade, the following officers were elected: President, Mr. C. A. Birge; vice-president, Mr. J. W. Lamoreaux; councillors, Capt. J. B. Fairgrieve, John Proctor, William Hendrie, J. Turnbull, Alex. Turner, W. A. Robinson and F. H. Whitton; secretary-treasurer, Mr. Chas. Stiff.

H. S. HOWLAND, SONS & CO.

WHOLESALE
ONLY.

Telephone,
Office Park, 1584.

TEMPORARY WAREHOUSE:

212-218 Cowan Avenue.

SAMPLE ROOM at 21 Scott Street (Telephone

Main 4056)

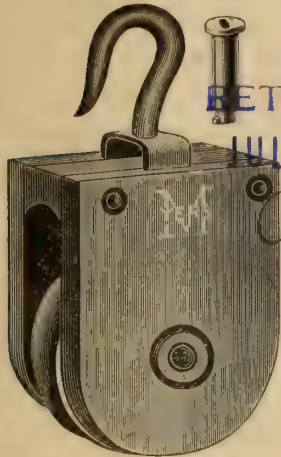
(Where Orders may be left if not convenient to visit our Warehouse at Parkdale).

LIMITED
ONLY
WHOLESALE.

Telephone,
Warehouse, Park 1585.

HAY FORK PULLEYS

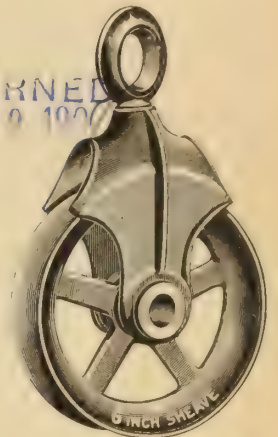
(SWIVEL EYE)



No. 112. Wood Frame.



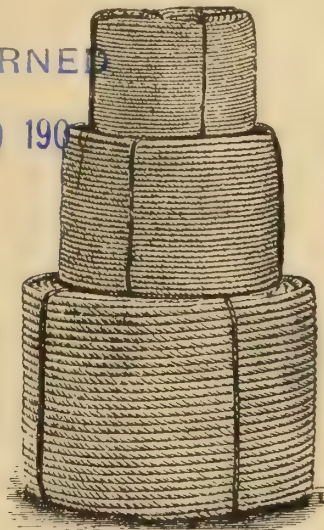
No. 210. Steel Frame.



No. 115. All Iron as cut.
No. 10. All Iron, B. S. & M.



No. 118. Iron Frame, Wood Wheel

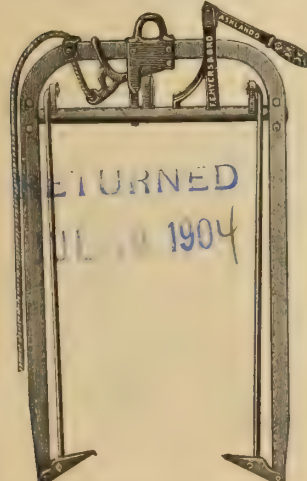


ROPE

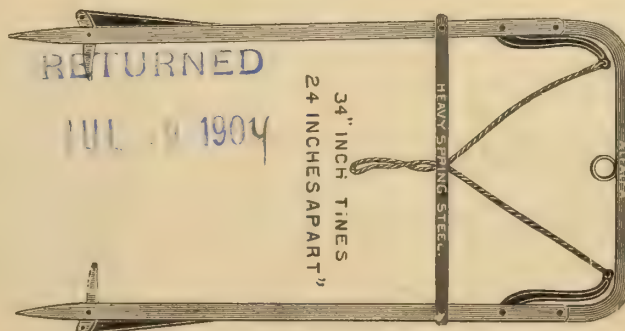


No. 114. Iron Frame, Wood Wheel

HAY FORKS



No. 671. Lock Lever Harpoon Fork.



No. 268. Double Harpoon.



"Columbia" Double Harpoon Fork.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.
Factory: Dufferin Street, Toronto, Ont.

Our prices are right.

TRUE BRAND CUTLERY.**POCKET CUTLERY****GUARANTEED QUALITY.****RAZORS****SCISSORS****BEST GOODS****RIGHT PRICES****E. F. WALTER & CO.,** 166 and 168 McGill St., **Montreal**

PRICE is a good thing,—but,
QUALITY is better.

Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

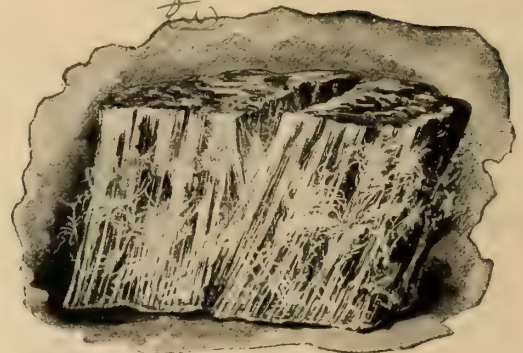
Wilcox Mfg. Co. of Ontario, Limited
LONDON, ONT.**ASBESTOS**

Pipe Covering,
Roofing,
Building Felts.

Papers, **RETURNED** Packings,
Felted Cloth, **AUG 4 1904** Cements,
Woven Cloth. *cut Book 22* Fibre.
12 page 15

Mill Board,
Stove Mats,
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Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, July 8, 1904.

OWING to the bright outlook for the near future, and the steady trade that has been done in the recent past, there is in general a happy feeling in machinery circles. No unusually large orders have been given, nor has anything startling taken place this week, but dealers throughout report that an average business is being done.

Practically two holidays this past week have interfered somewhat, and unsettled business slightly. The bulk of the trade done this week is in supplies and smaller machine tools. A few orders for lathes and machine shop equipment were placed, and a couple of boiler and engine installations have also been effected. Of heavier machinery, wood working equipment seems to be in greatest demand, and a good order was placed with a Montreal firm for a sash and door factory in the Eastern Townships. Some dealers say that shipments are a little slow at the present time, and there is a good deal of delay in getting in new machines. Enquiries are coming in faster than is usual, so that the outlook is bright, but collections are a trifle slow. The past month has been a good deal better than the corresponding one last year, and the outlook for July promises equally as well.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, July 9, 1904.

THE number of orders placed with local dealers have not been up to the expectations of last week. From inquiries last week it was hoped that some substantial orders might be placed this week. However, things did not turn out so. The usual amount of business has been done, and there have been numerous inquiries.

The demand for engines and boilers continues good. All lines of wood working machinery have a fair, steady demand, there being more doing in this line than in iron working machinery.

Machinery and Electrical Notes.

THE Chilliwack Power & Light Co. has been organized by J. B. Morgan, in Chilliwack, B. C. The capital of the organization is \$500,000. The purpose is to expend \$100,000 in the development of electrical power on the Chilliwack River. Most of the capital has been subscribed by Rossland investors. The plans for the power house and distributing system have been prepared.

The Ontario Wind Engine & Pump Co., Toronto, are building a handsome store and brick warehouse in Winnipeg. This warehouse will be fitted with electric hoist and all modern conveniences of an up-to-date warehouse.

The Dominion Government has voted \$165,000 for the installation of the pneumatic tube system of postal service for Toronto. John Galt, C. E., is preparing the necessary plans and specifications, and it is hoped that the system will be installed before the end of the year.

The South Shore Railway, the United Counties Railway, and the East Richelieu Valley Railway, are being sold.

A 70-horse power engine and a boiler are being installed in the Hartney Planing Mills, Hartney, Man.

The ratepayers of Grimsby, Ont., have carried a by-law to raise \$34,000 to install a system of waterworks in the town. It is intended to proceed with the scheme at once. The installation will consist of a filtering basis and pumping station on the beach, and a reservoir on the mountain.

A large air compressor is being installed in Dominion No. 2 colliery, of the Dominion Coal Co., at Glace Bay.

The new sash and door factory of the Cusson Lumber Co., Winnipeg, has commenced operations. The machinery is motor driven.

Terms have been reached in the settlement of difficulties in regard to the City of Kingston taking over the Kingston light, heat and power plants, and at a special meeting of the city council the agreement was ratified. The city gets possession of the plant on Aug. 1.

The W. C. White Boiler Works, corner Nazareth and Brennan streets, Montreal, have recently turned several large boiler contracts. Among them are two three hundred h. p. return tubular high pres-

sure boilers, triple riveted, and double butt straps; three 400 h. p. boilers for Montreal Abattoir Co.; one marine boiler for the tug Gilbert; one 125 h. p. boiler for the Thos. Davidson Mfg. Co., and two 60 ft. grain spouts for the grain elevator.

The factory of L. P. Morin & Fils., of St. Hyacinthe, was destroyed by fire last week. They had, besides a planing mill, a complete sash and door factory. With commendable enterprise, they at once secured another building, and ordered a complete installation of wood working machinery. The apparatus chosen is manufactured by the MacGregor-Gourlay Co., Limited, Galt, Ont., and the order was secured through their Montreal agents.

Penberthy Exhibit at Winnipeg.

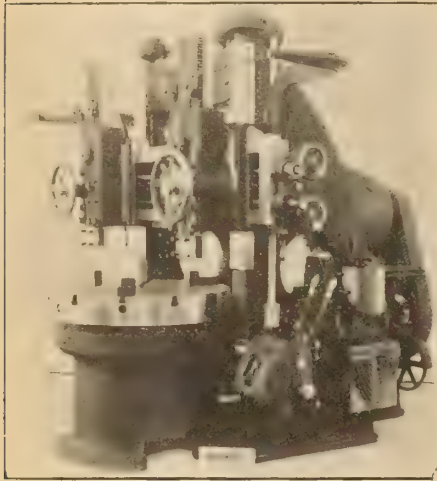
THE Penberthy Injector Co., Detroit and Windsor, Ont., intend having a process exhibition of the manufacture of their injectors. E. Burton Kelly, salesmanager of the company, will have charge of the booth, while one of the firm's best lathe hands will perform the machine operations necessary to complete "Penberthy" injectors. This exhibit is bound to be of interest to engineers and threshermen; in fact anyone who has never been inside a brass shop. Some attractive display stands of brass goods will help to make a first-class exhibit.

Best Workshop Floor.

IN a paper read by A. Pringle before the Canadian Society of Civil Engineers on Modern Workshop Construction in Canada, the author describes various forms of flooring, and the following is a description of a floor which he believes to be one of the most durable and economical. It consists of a three-inch cinder ground, well tamped to receive a three-inch tar and cinder foundation, rolled level, over which is laid a hot vulcanite composition, one inch thick, into which are bedded three inch planks. The planking is covered with two-ply tarred felt, over which is laid a one inch matched hardwood flooring. The author has found the layer of tarred felt, between the upper and lower planking, makes the floor dust, water and oil proof.

THE GISHOLT VERTICAL BORING MILL.

THE Vertical Boring Mill, illustrated in the accompanying engravings, is manufactured by the Gisholt Machine Company, Madison, Wisconsin, and it embraces several novel but very useful ideas in machine tool construction.



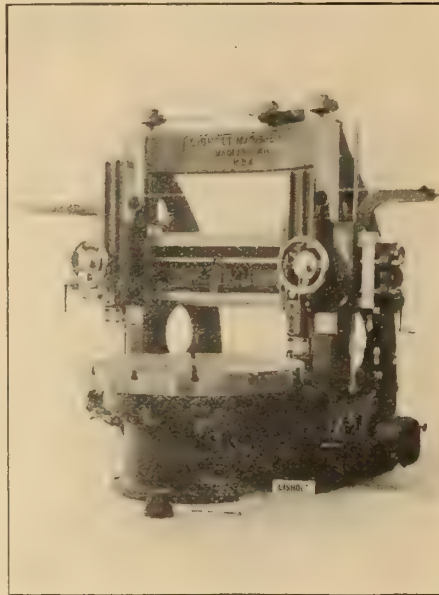
The drive of the machine is of the single pulley, constant-belt speed variety, which has heretofore been used principally in small machines, where a variable speed in the spindle was required. The application of this class of drive to machines of this particular character is a decidedly unique idea. While this principle has been used in small machines, as stated, it has been demonstrated a most successful drive in the way it has been adapted to the "Gisholt" mill. The position of the drive at the rear of the machine brings it entirely out of the way, and yet the handiness of the operating levers gives absolute control, without necessitating a change of position on the part of the operator. The absence of the old familiar cone pulley is one of the conspicuous features of this mill.

The headstock, as stated before, is of the friction class, self-oiling, which has been used with such great success by this company on its well-known turret lathes. This form of headstock gives complete control of the table, enabling the operator to instantly stop or start the table, or to move it but a fractional part of a complete revolution without the necessity of stopping and starting the motor or changing in any way the belt connection. It is becoming more evident every day in direct connected machine tools that the combination is far from satisfactory, unless there be

introduced somewhere between the motor and the driving mechanism a friction device of some kind. Otherwise it becomes necessary when the tool is stopped to stop the motor, a time consuming operation of no small importance.

The headstock of the "Gisholt" Mill is so designed that a variable speed motor with an increase of 50 per cent. above normal, will give an almost ideal arrangement of speeds. Thus, a very moderate priced motor equipment only is required in conjunction with this mill.

Six mechanical changes of speed are given by this form of headstock, all of which are immediately obtainable by the use of conveniently located levers.



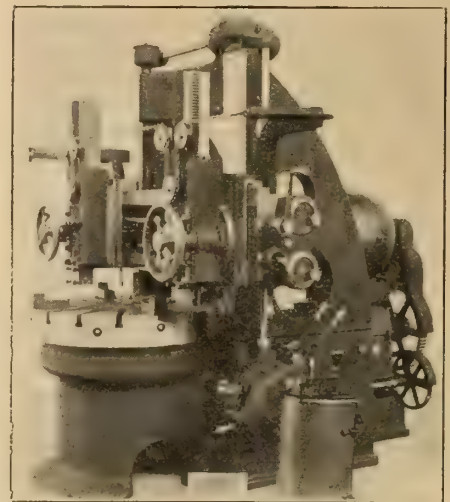
The levers are, of course, non-interfering.

The illustrations here given show how conveniently all operating levers are placed. The operator has every lever within easy reach of his customary position, and the stopping and starting device is controllable from either side of the machine. The changes of speed being all obtained by gearing either through the friction clutch or direct, and the elimination of the cone and belt style drive, with its attendant shifting and slipping of belts, makes this device far superior in every way. Such an arrangement makes the handling of the machine very satisfactory to the operator, as it requires only the shifting of a lever to get the desired change of speed. Twelve speeds of the table are obtainable.

The heads are entirely independent of each other, and may be set to any angle. They are controlled by feed mechanisms located on either side of the machine. The feeds, both vertical and horizontal, are also independent and may be operated by power or by hand. A range of ten feeds is given. Each head is fitted with a positive stop, so that centre of the downslide may be brought to coincide with the centre of the table.

The machines are so arranged that the right-hand head may, when desired, be removed and replaced by a turret head, which in addition to its vertical movement may be swiveled to any angle. It is provided with an automatic tripping device. A screw cutting attachment may be also employed when desired.

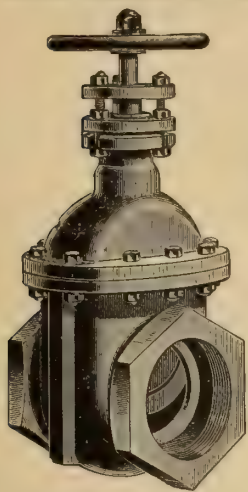
The feed tripping device, with which this machine is fitted, is automatic in its action. By an index dial the operator is able to set the feeds for throwing out at any point desired, either vertical or horizontal, and with very little or no calculation on his part. The mere setting of the tripping device stops the tool accurately at any predetermined point. These dials are plainly shown at the end of the cross micrometer index dials, with which both feed rods and feed screws are fitted, read to .0010 inch. Such an arrangement is most convenient, to say nothing of its time-saving qualities. Much calipering is done away with, and this arrangement certainly reduces it to a minimum.



All gears on the machine are accurately cut and incased, and in its general outlines the machine presents a massive yet exceedingly neat appearance. The metal is well distributed, and is calculated to withstand the strains attending the work of heavy cutting at high

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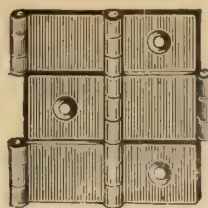


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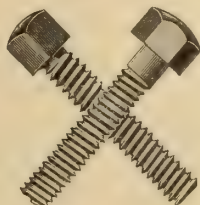
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What the United States Government says :

" Emery is a mechanical admixture of corundum and magnetite or hematite. It is, of course, the presence of corundum in the emery that gives to it its abrasive qualities and makes it of commercial value, and the abrasive efficiency of emeries varies according to the percentage of corundum they contain." — *Bulletin of the United States Geological Survey, No. 180, page 9.*

The diamond is crystallized carbon ; corundum is crystallized alumina. Corundum is next in hardness to the diamond.

Craig Mine Crystal Corundum is the only pure corundum on the market. It has 95 per cent. to 98 per cent. pure corundum, as against the 30 per cent. contained by most emeries.

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Note :—Craig Mine Crystal Corundum grains are numbered as follows :
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speed. Being practically self-contained, no special foundation is required.

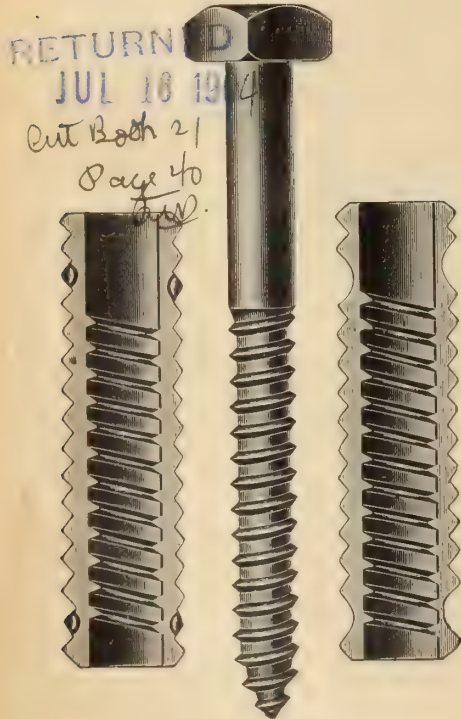
The crossrail is of a very rigid construction, and, of course, is raised and lowered by power. The table may be a universal combination chuck fitted with three movable top jaws, or face plate with independent jams may be substituted when desired.

The table is powerfully geared, being driven by spur pinion. Spindle revolves on large, self-oiling babbitted surface.

At present these machines are being made in six sizes—34 inch, 42 inch, 54 inch, 60 inch, 64 inch, and 74 inch. The company will show the mills at the St. Louis Fair, this exhibit being located in Machinery Hall, Block 14, Aisles "F" and "3."

Diamond Expansion Shields.

WITH the recent adoption by manufacturers of G. P. lag screws of standard threads to fit the Diamond Expansion Shield, there has also been made an important improvement in the shield itself. The threads in the shield are now omitted for a space of about three-quarters of an inch, thus allowing the unthreaded portion of any standard make of lag screw to enter the shield. In the past it has been necessary to use special lag screws threaded the full length of the shield.



The United States Government Engineer Corps some time ago adopted a standard bronze diamond expansion bolt, and have recently placed several large orders with the manufacturers through local dealers, for use in connection with electric wiring on Government fortifications. The Diamond Expansion Shield is manufactured by the Diamond Expansion Bolt Co., of 9 Murray street, New York.

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VERTICAL engine wanted; about 28 x 28, with fly wheel, about 16 feet diameter, 12" x 12" rim. Box 5, Globe, Hamilton.

WANTED — Foot lathe; describe and state lowest price. Box M 31, **HARDWARE AND METAL**, Toronto.

WANTED—30 to 40 h.p. high speed engine; in good order. Apply M 32, **HARDWARE AND METAL**, Toronto.

WANTED—A small second-hand nickel-plating outfit; state price and particulars to Drawer O, Renfrew, Ont.

WANTED—Good second-hand double spindle drilling machine, with a maximum distance between centres of at least 50 inches. Apply **HARDWARE AND METAL**, Toronto.

WANTED—Second-hand water motor—not less than 1½ horsepower or more than 2 horsepower; water pressure 45 lbs. Apply to Box 184, Cornwall, Ont.

WANTED—36 x 36 in. x 10 ft. planer; 16 ft. lathe, 24 in. swing; and No. 500 belt drivers' drop hammer. Address Box M 145, **HARDWARE AND METAL**, Toronto.

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Enquiries for above books should be sent to The Editor

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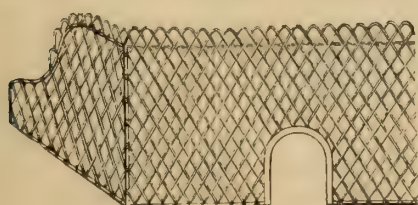
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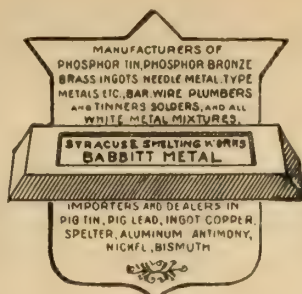
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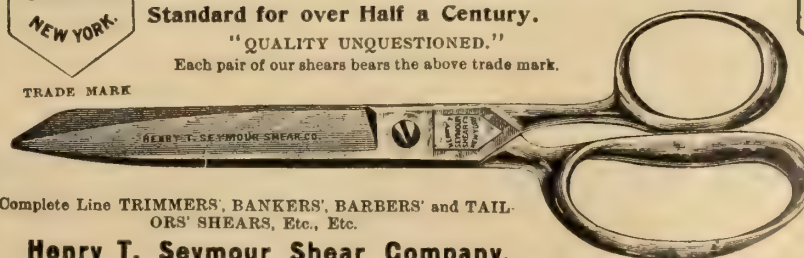
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THE DOMINION EXHIBITION.

ON July 25 the Dominion Exhibition opens at Winnipeg. The annual exhibition at that city is always representative of western life and industry, but this year, supplemented by the Dominion grant, and by the official recognition of the Manufacturers' Association, it is likely to be an exhibition of national importance. Many of the manufacturers of the east are making arrangements to exhibit to the consumers of the West their "Made in Canada" products. Thus, it is hoped, the bond of commercial interdependence will be strengthened.

Hardware and Metal, in recognition of the national character of the exhibition, will devote considerable space to the displays of hardware and metal products, as well as to the exhibition generally. In many cases, illustrations of the exhibits will, we trust, be given to our readers, so that those in the West who are prevented from attending may

have some impression of what the eastern manufacturers have for their attention.

THE TREATMENT OF AGENTS.

A COMMON source of complaint among Canadian business men is the unsatisfactory methods often employed by firms in Great Britain doing business with this country. There is just a possibility, however, that while the faults of the business firms in Great Britain are being considered our own faults may be overlooked.

There was a time when the exports of this country were practically confined to agricultural products and raw materials. That day is past. We have now become exporters of a great many finished articles, and our trade in this particular is rapidly increasing.

As our ability to export increases so does the necessity for our employing proper methods become more obvious. The reports of the Canadian commercial agents in other countries repeatedly point out the necessity of correcting certain short-comings. And these are supplemented by reports which come through private sources.

Promptness in correspondence is most essential. The shipping of goods which are up to sample is imperative, and agents who are appointed as representatives should be properly treated. Copies of correspondence, which the firm in Canada may receive from houses in the territory looked after by the agent, should be supplied the latter when it does not come through him. He should be thoroughly informed on all matters of this kind. Some contribution should also be made to his expenses if he is to be expected to be zealous for the interest of the firm, notwithstanding the fact that he may be working on commission. Firms in the United States who have agents abroad do this, and it pays them. Then when new goods are put on the market electros of these should be sent to the agent to be used in circular or newspaper advertising. A cut of the firm's head-office should also be found on letterheads and other business literature used by the agent. In fact everything reasonable should be done to assist the agent and to give publicity to the goods manufactured by the firm.

When an agent has been appointed it does not matter whether he is purely on commission or not, the principals should take an interest in him and the territory which he controls. If interest is not taken in the agent it is only natural that his concern in the welfare of the particular lines which he handles for them should become apathetic.

As we have already said, something should be contributed to his expenses, and his principal should insist that he make periodical reports as to not only the business he has done, but touching upon the prospects for the future and what methods could be employed to increase trade. By insisting on this and by keeping him in turn thoroughly posted as to new goods, etc., the possibility of success is very much increased.

There is no doubt about it that if every manufacturer who caters to the export trade would exhibit more enthusiasm and concern for the success of his foreign business the aggregate results would soon be revealed in the trade returns of the country. "It is the littles that make the muckles," as the old Scotch proverb says.

HE HAD TO IMPORT.

A N incident that points a moral worthy of the attention of business men arose one day this week, when a hardware retailer, the representative of a big wholesale hardware house, and the editor of Hardware and Metal, were discussing trade matters. The retailer had explained his interest in some well-boring operations, and casually mentioned that he found it necessary to import the well casing.

"Why, we handle that, and could give you it at as good figures as you could import?" exclaimed the wholesale representative.

"Do you really?" answered the retailer. "Well, your travelers have been calling on me for years, and I never suspected you carried the line."

"The firm should advertise," suggested Hardware and Metal.

"I have often wondered why you do not," said the retailer, turning to the wholesale representative.

"I wish they did," said the latter.

THE MERCHANT WHO TRAVELS.

THE merchant who grows in power and influence, whose business expands in volume and increases in net revenue is the man who is on the alert for new ideas and who has learned where to secure the ideas which are new and worthy of his attention.

While claiming great virtue for the trade paper in this regard, one must recognize that in travel lie the greatest possibilities for the business man desiring to come into real contact with the world, he is especially interested in.

We are all imitators, more or less. But unless we can see or hear of the best things, we cannot incorporate them into our own experience. It has become a time worn debate whether travel or reading is the more educative. But the business man is under no necessity of arguing this point. The best reading will be almost delivered at his door, as he desires. He should, however, not be content with that, but should, as often as practicable, visit the great centres of life, of business activity. And when he does so, he should lose no opportunity to absorb hints and suggestions likely to be of value to him when he is back to work.

ASSIST THE CLERKS.

WE would suggest to any hardware dealer who has not yet read the letter and accompanying comment on page nine of this issue, to do so, and if possible to act upon the suggestions therein. Wisdom and justice unite in the view that the merchant should lend every assistance possible to his clerks in their efforts to improve themselves, and so be more useful to themselves and to the firm.

THE FIELDING BANQUET.

A PUBLIC banquet is to be tendered Hon. W. S. Fielding, Minister of Finance in the Dominion Government. Many business men would like to honor Mr. Fielding in this way, but are practically compelled to hold aloof by the

fact that those in charge of the affair have, as is too frequently the case in Canada, seen fit to make the occasion a party demonstration.

Mr. Fielding, in his position of Finance Minister, has come in contact with all industrial and commercial classes in Canada and, by his clean methods, his practical sagacity and fair treatment, has won genuine respect and regard. For this reason it is regrettable that a banquet to him should be made a petty party demonstration instead of a function at which all classes might express their desire to do him honor.

A similar opinion was expressed by many Liberal business men in Montreal when the recent banquet to Mr. R. L. Borden, leader of the Opposition, was

OUR MAILING SYSTEM.

If it should happen that there is a delay in receiving your copy of this paper or you do not receive it, you can without hesitation place the blame on the Post Office authorities.

Particular pains are taken in our Mailing Department to insure the safe delivery of every copy of the paper. We have a distributing Post Office of our own in our establishment, where we sort all the papers into their different routes and districts. These are immediately despatched to the Station and placed on the train, instead of being sent to the General Post Office for distribution like other papers.

All our subscribers in Ontario and Quebec should receive their copy of the paper on the day of publication, and if it is not received on that day we would like to hear of it, so we can trace the matter up and find out where the fault lies.

We are anxious to maintain a perfect and fast delivery system, and we have now one of the best equipped mailing departments of any publishing house in America, but you will help us still further by letting us know of the slightest delay in the delivery of your copy of the paper.

turned into a Conservative party demonstration.

COSTLY TARIFF WARS.

TARIFF wars are costly. The proof of this is to be seen in the cold statistics recently published in a report prepared by the British Government. It deals with the tariff wars between France and Switzerland, France and Italy, and Germany and Russia.

The tariff war between France and Switzerland was in 1893-5. The latter country increased its customs tariff on French goods by 190 per cent., and the former by 41 per cent. against the products of Switzerland. As a result the exports of France to Switzerland for

home consumption fell off 43 per cent., and the imports from Switzerland 27 per cent. The transit trade between the two countries also suffered. That to Switzerland from France declined 26 per cent., and that to France from Switzerland 17 per cent.

The tariff war between France and Italy was even more disastrous. It is estimated that when it ended in 1899 the joint loss of the two countries was about \$600,000,000. The exports from Italy to France declined 57 per cent., and from France to Italy 50 per cent.

The tariff war between Germany and Russia only lasted eight months, which, it is held, was not long enough to permanently dislocate the conditions of trade. At any rate, however, it was long enough to make the two countries eager for peace. The trouble arose over Germany's decision to lower her duties on breakstuffs imported from countries which gave a like concession on the products of her factories. As Russia was at the time inaugurating a policy of protection for her iron industry, she refused to comply. Then the tariff war began, and ended only when Russia practically surrendered to the original demands of the German Empire.

The experience of these three countries is particularly interesting to Canadians, in view of the increasing sentiment in this country for a higher tariff against the United States. Our tariff is about one-half that of the latter country, while our exports from the United States are 90 per cent. larger than their imports from us. The McKinley and Dingley tariffs were designed to injure Canada. And although our general export trade has increased rapidly since then, the inequality of the two tariffs and of the international trade of the two countries is so striking as to create a pronounced spirit of retaliation.

We may never go so far as to declare a tariff war. But it is well for us to remember, in view of the experience of other countries, that in tariff as well as in physical warfare, both combatants suffer.

McCLARY'S ANNUAL PICNIC.

ON Saturday the employes of the McClary Mfg. Co., London, Ont., held their annual picnic at Port Stanley, on the shores of Lake Erie. The morning special, consisting of twelve coaches, carried about one thousand of the employes and their friends, and during the day nearly five hundred more arrived on the grounds. The day was a delightful one for an outing and the beautiful beach and picnic grounds at Port Stanley presented an animated scene. Although the crowd was not as large as usual, doubtless owing to the holiday excursions, the picnic passed off very successfully. The programme of sports, a lengthy one, was both interesting and exciting throughout, there being no dearth of entries for each event.

On the arrival of the train, the first event was a fishing contest, and several competitors went over to the wharf to try for the fish. But the contest was rather slow, for, at the end of the half hour, no fish had been caught, the judges deciding that the prize money go back into the treasury.

Three games of baseball contributed to the day's enjoyment. In the morning a game was played between girls from the enamel department and from the office staff, the former winning by a considerable margin.

After dinner a game between the New Foundry team and the Tin Shop nine aroused enthusiasm, the former winning by 8 to 4. The teams were:

New foundry—B. MacIntosh, catcher; Rown, first base; Roberts, second base; Dixon, short stop; Simpson, third base; Pirie, left field; Lewis, centre field; Adair, right field; Roberts, pitcher.

Tin shop—J. McIntosh, catcher; Bowman, first base; Phillips, second base; Roberts, short stop; Stewart, third base; Eccleston, left field; Burns, centre field; Braudy, right field; Fitzmaurice, pitcher.

The Pastimes, of St. Thomas, played an exhibition game with the Port Stanley team in the evening. The score was 5 to 2 in favor of the latter.

Early in the afternoon the programme of sports was started on the beach. Interest in it continued throughout the afternoon. The winners were:

Men's race, 100 yards—1, W. Finlay; 2, J. Dixon; 3, Spencer Thorpe.

Married ladies' race, 50 yards—1, Mrs. Caruthers; 2, Mrs. Reid; 3, Mrs. Anderson.

Boys' race, under 17 years—1, P. Murch; 2, G. Roberts; 3, A. Tamlin.

Married men's race, 100 yards—1, O. Pirie; 2, D. Edwards; 3, R. D. Adair.

Girls' race, under 14 years, 50 yards—1, Kate Bamed; 2, Edna Murch; 3, Mabel McLeod.

Boys' race, under 14 years, 50 yards—1, Charles Pirie; 2, John McPhail; 3, Leonard Burgess.

Girls' race, under 12 years, 50 yards—1, Jessie Sanderson; 2, Sadie Bamed; 3, Myrtle Craik.

Boys' race, under 12 years, 50 yards—1, Stewart Gunn; 2, John McPhail; 3, George Wilkinson.

Girls' race, under 9 years, 25 yards—1, Myrtle Ellie; 2, Lily Bamed; 3, Ernie Weir.

Boys' race, under 9 years, 25 yards—1, Harold Smith; 2, Charles Hendry; 3, Eddie Maplettoft.

Girls' race, 7 years, 25 yards—1, Myrtle McLeod; 2, Ethel Craig; 3, Eddie Elliott.

Boys' race, 7 years, 25 yards—1, W. Chittick; 2, Roy McLeod; 3, Duncan Elliott.

Single ladies' race—1, E. Turnbull; 2, E. McPhail; 3, L. Gardner.

Girls' under 17 years, 50 yards—1, V. Player; 2, A. Archer; 3, A. Webber.

Thread and needle, ladies' race—1, W. Woodward; 2, M. Walton; 3, E. Hayden.

Standing long jump—1, James Russell; 2, W. Proctor.

Running hop, step and jump—1, G. Eccleston; 2, D. Edwards.

Hurdle race, 200 yards—1, B. MacIntosh; 2, G. Baxter; 3, W. Finlay.

Married men's race, for special prize—Won by George Hendry.

100 yards, for special prize—Won by George Hendry.

100 yards, for special prize (gold watch)—Won by W. Proctor.

Single ladies' race, for special prize (gold ring)—Won by Miss E. Turnbull.

Steeplechase—1, J. Moore; 2, A. Fitzmaurice; 3, E. Parsons; 4, J. Bartlett.

A tug-of-war between the tin shop and moulders, captained by Messrs. Jacobs and Leech, resulted in a victory for the moulders, and the \$10 prize was equally divided among the winners.

The ladies' tug-of-war between picked teams was very exciting. The captains were Misses Harper and Patton. Miss Harper's team won the prize.

After the sports on the beach were concluded the crowd found its way to the picnic grounds, the waltzing contest taking place in the pavilion. Several couples entered, and the dancing was good. The prizes were won by Mr. and Mrs. L. Ouimett and Mr. G. Eccleston and Miss Harper.

Miss Myrtle O'Mara won the prize for step-dancing, and her Irish jig was much appreciated.

L. Sage's stump speech was very amusing, and the judges thought that as his was the only entry he should be given the prize.

Several gentlemen contributed to the afternoon's enjoyment by entering in the comic song contest. These were Messrs. W. Smith, J. Birk, G. Clampitt, W. Hickey and L. Sage. Mr. J. Birk won first and Mr. W. Smith was given the second prize. The pavilion was then cleared and an informal dance took place. The music was supplied by the Tonv Vita orchestra.

The judges for the sports were: Colonel Gartshore, J. Nicholson, J. K. H. Pope, W. Pope, T. King, H. Miller.

TO REOPEN CRAMP STEEL WORKS.

A PLAN to reopen the plant of the Cramp Steel Company, Limited, at Collingwood, Ont., has been evolved by a committee consisting principally of the promoters, among them being Messrs. F. A. Hall, J. A. Currie, Duncan Donald, William Liddington, W. J. Lindsay and J. T. Duguid. A mortgage on the plant was about to be foreclosed by the North American Trust Company of New York, but a method of reorganization has been arranged, under which the Northern Iron & Steel Company will be formed, with \$2,500,000 authorized capital, of which \$1,250,000 will be common stock, and \$1,250,000 six per cent. preferred stock, as to both principal and dividends.

For each share of preferred stock in the old company there will be allotted to applicants two shares of the six per cent. preferred stock in the new company, \$85 paid up. For every five shares of common stock of the old company there will be allotted to applicants one share of six per cent. preferred stock in the new company, with \$85 per share paid up. The Imperial Securities Company, Limited, will place any stock not taken up and secure subscriptions for additional working capital should it be necessary. A circular inviting co-operation has been sent to the shareholders.

PERSONAL MENTION.

Mr. J. E. Telford, hardware and furniture dealer, Markdale, Ont., was in Toronto on business this week.

Mr. D. M. Seyden, manager of the hardware department of James Clinkskills, general merchants, Saskatoon, N. W. T., writes: "I consider Hardware and Metal a first-class journal, and that no up-to-date business man can afford to be without it."

Mr. G. W. Miller, who has been in partnership with J. E. McConnel, under the style of McConnel & Ferguson, advertising agents, London, Ont., has disposed of his interest to M. M. Ferguson. The business is continued under the style of McConnel & Ferguson.

Mr. James F. Paton, son of James W. Paton, paint and oil merchant, 18 Adelaide street west, Toronto, was married on Thursday evening, June 30, to Miss Amy Aldis, daughter of Mr. Robert Aldis. Mr. and Mrs. Paton will, after a trip on the upper lakes, take up their residence at 405 Delaware avenue, Toronto.

Mr. J. Taylor Webb, representative of the Thos. Davidson Mfg. Co., Montreal, in Manitoba and the west, is spending a few week's holidays in Ontario and Quebec. After a short stay in Montreal Mr. Webb, who is accompanied by his wife, has spent his time visiting friends in various points, from Quebec City to Western Ontario. Since going to Winnipeg he has become a westerner in every sense, enthusiastic in his opinions of the "growing country."

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, July 8, 1904.

BUYANCY and activity are characteristic of the hardware trade just now. "Business is good" is the universal report, and the falling off that is usually expected at this time of the year has shown no sign of materializing. The holiday last week made a slight break, as is bound to be the case, but did not interfere much with the volume of business. More goods are being shipped this week than last, and on the whole, things are moving in a brisker manner. Some retailers have already commenced to look ahead for Fall goods, and are placing their orders. The bright harvest prospects have evidently some influence in this direction.

A few changes in price are noted this week, in each case an advance having taken place. Wood hay rakes have increased from 10 per cent. to 12 per cent. and rubber hose is higher this week by about the same amount. The discount in agricultural wrenches is less, having been reduced from 75 to 70 per cent.

No shortages whatever are reported, and there seems to be an ample supply in all lines to meet the current demands. Inquiries are more numerous than usual this week.

Wooden Handles—The demand is good and the change in price noted last week still holds. We quote maple and hickory handles of all kinds, discount 45 per cent.; ash hayfork handles, manure, spade and shovel handles and adze handles, discount 40 per cent.

Hay and Grain Scythes—Business in these lines is brisk throughout.

Grass Hooks—A good demand still continues.

Scythe Stones—There is a briskness in scythe stones in common with scythes and grass hooks.

Wood Hay Rakes—An advance in these goods is noted this week, being from 10 to 15 per cent. increase. We quote: Wood bow, straight, No. 1, \$3.40 a dozen; No. 2, \$3.10 a dozen; bent, No. 1, \$3.60 a dozen, list price. Discount, 40 per cent.

Lawn Mowers—The season for these is by no means over, and demand still keeps up. We quote as follows: With 8 inch wheel, sizes 12, 14 and 16 inch, \$2.65 each; with 9 inch wheel, size 12, \$3; size 14, \$3.12 1-2; size 16, \$3.25 each; Philadelphia pattern, size 12, \$3.25; size 14, \$3.50; size 16, \$3.75 each; High Wheel, size 12,

\$4; 14, \$4.25; 16, \$4.50; 18, \$4.75; 20, \$5.25 each.

Garden Hose—An advance of from 10 to 15 per cent. in garden hose is noted. There is still a good demand.

Hose Reels—A fair business is still being done. Prices, 15 to 25 per cent. higher than last year.

Lawn Sprinklers—Only a few orders received this week. Prices as before, \$2.50 to \$18 a dozen.

Ice Cream Freezers—The large volume of trade being done in this line throughout the earlier part of the season still continues. We quote the following range of prices for the leading brands: One quart, \$1.50 to \$1.60 each; 2 quart, \$1.70 to \$1.80 each; 3 quart, \$1.95 to \$2.25 each; 4 quart, \$2.35 to \$2.60 each; 6 quart, \$2.95 to \$3.25 each; 8 quart, \$3.70 to \$4.10 each; 10 quart, \$4.75 to \$5.50 each; 12 quart, \$5.75 to \$6.50 each; 14 quart, \$6.75 to \$7.50 each.

Washing Machines—Not many orders reported. We quote as follows: Round (three legs), \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Agricultural Wrenches—Business is quite brisk in this line. An advance in price is reported. Former discount was 75 per cent.; present discount, 70 per cent.

Harvest Tools—Although the bulk of the trade in harvest tools has been done, there are still a few repeat orders coming in. Discount as before, 60 per cent.

Hand Saws—A steady trade is being done. The increased price noted last week still holds. Discount, 10 per cent.

Spring Hinges—There is a nominal trade being done. We quote as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—Not much business being done. Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10-inch sizes is \$4.25.

Wire Coat and Hat Hooks—This line is moving well. Prices continue 75c a gross for 3 inch.

Churns—A sluggish market is reported. Discounts, 40 and 15 per cent. f. o. b. Montreal, and 30 and 10 per cent. f. o. b. factory.

Green Wire Cloth—A slight falling off in green wire cloth this week. We

quote as before, \$1.50 per 100 square feet.

Poultry Netting—Hardly as active as formerly, but still a fair business is being done. Discounts for 2 inch 19 gauge standard extras are 60 and 5; for 2 inch 16 gauge the discounts are 55 and 5 per cent.

Annealed Hay Wire—A splendid business is the feature at present. Prices and discounts the same.

Galvanized Poultry Netting Staples—Demand is brisk. Prices are: Sizes 5-8, 3-4, 1 1-8, 10 lb. boxes, \$12.50 list; 25 and 50 lb. boxes, \$12.25 list; 100 lb. boxes, \$12 list. Less 57 1-2 per cent.

Galvanized Wire—Market is slow this week. We quote as follows: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f. o. b. Cleveland, No 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots 12 1-2c extra per 100 lbs. will be charged.

Rivets and Burrs—Business continues fair. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

Tinned Roofing Caps—An average trade. Price, 6c per lb.

Screws—A brisk demand this week. No shortage. We quote discounts as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—The market continues active. We quote discounts as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Cut Nails—The supply continues good. Demand is brisk. Prices continue steady. We quote as before, \$2.30 per keg f.o.b. Montreal, Hamilton, Toronto and St. John.

Wire Nails—A steady demand for all sizes. We quote the following prices: \$2.40 per keg carlots and \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Pressed Spikes—Business fairly good. Discount as before, 25 per cent.

Horseshoes—A brisk demand is reported. Our quotations are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—Trade is good. We quote a more complete list this week: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list; other brands, 55 per cent. off list.

Shotguns and Rifles—Many inquiries are coming in. The advance noted last week still holds good, and no further increase yet, as was expected.

Ammunition—Fall business commencing. No further change in price this week. We quote: Rim fire cartridges, 30 and 2 1-2 discount from list; centre fire, 5 per cent. advance on list.

Game Traps—A fair demand. Last week's change in price remains. Discount is 70 per cent. off list.

Roofing Pitch—Business is fairly active in this line.

Building Paper—Trade is splendid in building paper. We quote as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Firebrick—Very little increased activity is reported this week.

Cement—It is believed that the cement business will hardly assume its usual activity until Fall. The market has been dull this year, so far, and the usual increased Spring trade was not felt. Prices remain unchanged at former quotations, which are: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex cars.

Cordage—No further change in price is reported this week. The demand keeps up well. Quotations are as follows: Pure manila, 14 1-2c; British pure manila, 12c; sisal, 11 1-2c; double lath yarn, 10c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

Barb Wire—The trade in barb wire has fallen off somewhat. Prices continue the same. We quote: \$2.75 per 100 lb. f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

METALS.

There is rather a quiet feeling in the metal market this week. It is a little between seasons, as it were, the Spring trade being over, and the Fall trade not having yet opened up. Copper is somewhat firmer, and there is considerable activity in that line. Tin recovered slightly since last week, but has again fallen back, and the former quotations still prevail. The only changes in price are a decrease in machinery steel from \$2.45 to \$2, and in scrap metals.

Pig Iron—While a better feeling pervades the pig iron market this week, trade is said to be dull, and little stock is moving. No changes in prices.

"Disc." No. 1.....	\$17.50	delivered Montreal.
"Dom." No. 1.....	18.50	" "
Usual difference in price for lower grades.		
Ferrona No. 1.....	\$18.00	delivered Montreal.
" No. 2.....	17.50	" "
" No. 3.....	16.50	" "
" No. 4.....	16.00	" "
Londonderry.....	\$18.50 to \$19.00	delivered Montreal.
Summerlee.....	18.50	" "
Glangarnock.....	20.00	" "
Gartsherrie.....	19.25	" "
Carnbroe.....	18.50	" "
Carron No. 1.....	19.00	" "
" (special).....	17.50	" "
Ayresome No. 1.....	17.50	" "
" No. 3.....	16.90	" "
Clarence No. 1.....	16.25	" "
" No. 3.....	16.00	" "

Bar Iron—There is considerable activity in bar iron this week. Prices continue: Merchants' bar, \$1.75; horse-shoe iron, \$2; forged iron, \$1.95.

Merchant Steel—A fair trade is being done. Machinery steel dropped from \$2.45 to \$2. We quote: Sleighshoe, \$1.90; tin, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.35; machinery (iron finish), \$2; square harrow, \$2.45.

Tool Steel—A nominal trade. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 9c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

Black Sheets—No change this week. We quote: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Galvanized Iron—A marked quietness prevails, while prices continue steady. Prices quoted are

as follows: Queen's Head, 28 gauge, \$4.30; 26 gauge, \$4.05; 22 to 24 gauge, \$3.80; 16 to 20 gauge, \$3.70; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.30. "Windmill Best," 28 gauge, \$4. In less than case lots, 25c extra.

Canada Plates—We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized, \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Sheet Zinc—Market steady at former figures. Cask lots are selling at \$6.25 to \$6.50. Small quantities, \$6.50 to \$6.75.

Zinc Spelter—Quoted at 6c, subject to concessions for quantities.

Tinplates—Market firm. No change. Cokes, \$3.75 and charcoal, \$4.

Ingot Tin—Tin recovered slightly since last week's issue, but has again fallen back, so that last week's quotations still hold. Concessions are obtainable, however, on large orders. The quotations are 30 to 30 1-2c.

Ingot Copper—Copper is somewhat firmer, and there is considerable activity. The quotations of 13 1-2 to 13 3-4 are firmly maintained.

Pig Lead—Quoted at \$3.25 to \$3.35.

Coil Chain—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on carlots.

Scrap Metals and Old Materials—There is continued inactivity, due to the fact that the big concerns are not buying. This has resulted in a lowering of prices in scrap, lead and brass. We quote: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

LONDON METAL MARKET.

From The Metal Market Report July 6.

Pig Iron—Scotch warrants, Glasgow, closed at 51s 9d, unchanged. Middlesboro No. 3 foundry at 42s 9d.

Tin—Spot tin opened quiet at £117, futures £117 2s 6d, and after sales of 160 tons of spot and 100 tons of futures closed steady at £117 for spot and £117 2s 6d for futures.

Copper—Spot copper opened firm at £57 6s 3d, futures £57 5s, and after sales of 150 tons of spot and 250 tons of futures, closed quiet at £57 5s for spot and £57 3s 9d for futures.

Lead—The market closed at £11 13s 9d.

Spelter—The market closed at £22.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,

10 Front street east.

Toronto, July 8, 1904

A SLIGHT falling off in the aggregate of business is reported, though the inquiry for harvest tools, particularly for haying, is of an active sorting nature, and an improvement in the demand for guns and ammunition is reported. The competition for business in steel track door hangers is still keen, and price concessions are being made. The inquiry for building paper, cement, etc., keeps active. Prices are steady throughout, no changes being reported this week.

Harvest Tools—Business in this line, though of a sorting nature, aggregates a large volume. Prices are steady, the advance in handles being well maintained.

Sporting Goods—The advance made by some houses on American ammunition is firmly held. An increasing demand is reported.

Washing Machines—A fair trade is doing. Prices are as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Woodenware—A fair business is reported. Prices are now as follows: Tubs, No. 0, \$11.55; No. 1, \$9.35; No. 2, \$8.25; No. 3, \$7.15; pails No. 1, 2 hoops, \$1.93; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 6 dozen packages (12 to case), 95c.

Oil Stove Wick—Prices are steady since the recent advance of about 10 per cent.

Steel Track Door Hangers—Quotations are still withdrawn by some manufacturers, who are making concessions to meet competition. A good trade is reported.

Chain—A good sorting business keeps up. Prices are as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Lawn Mowers—Demand for this line now quiet. Prices are unchanged, as follows: Woodyatt, 10 1-2 inch wheel, \$8.50; Star, 9 inch, \$7; Daisy, 8 inch,

\$5.75; Philadelphia, 7 1-2 inch, \$7; Ontario, 7 1-2 inch, \$15.80; King Edward, 12 inch, \$9.50 (14 inch cut in above). D. Maxwell & Sons, 10 1-2 inch, \$7.50 to \$10; 9 inch, \$5.50 to \$6.25; 8 inch, \$4.90 to \$5.50. Discount 50 per cent.

Screen Doors—A fair trade is doing in this line. We quote as follows: Common, two or three panel, walnut, 4 inch, \$6.50; yellow and green stained, \$6.75; in natural colors oil finish, \$8.75, with 20c less for 3-inch style.

Screen Wire Cloth—Prices steady at \$1.50 per 100 ft.

Spring Hinges—There is a fair demand. Prices steady, as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Barb Wire—Sorting trade is still fair. Prices are steady. We quote as follows: \$2.75 per 100 lbs. f.o.b. Toronto and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—A fair trade continues at unchanged prices. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs. extra charged.

Coiled Spring Wire—Sorting orders are coming in from day to day. Prices are steady. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—A fair business is reported, with prices still steady. Quotations are: \$2.45 per keg f.o.b. Toronto, with carlots \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Not much doing, with prices as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is still quiet. Prices are unchanged. We still quote

discounts as follows: "C" brand, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—An active demand continues. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Business keeps brisk in all sizes, at steady prices. We quote as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—A moderate demand is reported from retailers. Prices are steady. We now quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Cordage—There is a fair trade in rope, etc., but practically nothing is doing in binder twine now. Prices are steady since the rise of 1-2c in rope and yarn. We quote: Sisal, 10 1-4c; standard, 10 1-4c; standard manila (550 ft.), 11 1-4c; manila (600 ft.), 12 1-4c; pure manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are unchanged as follows: Pure manila, 14 1-2c; British pure manila, 12c; sisal, 11 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sashcord, "Hercules," 32 to 35c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5-32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 25 to 28c; 4 ply, 32 to 34c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Building Paper—There is nothing special in the market this week. There is a good demand, with firm prices. We quote: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

BRAND

Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Price to Sales Agents

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MONTREAL, QUE.

or to

Canada Iron Furnace Co.

MIDLAND, ONT.

Limited

We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

Firebrick—The demand is steady. Prices remain unchanged at former quotations, which are: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade, 32 1-2 to 40c.

Cement—There is no change in the cement market this week. Trade continues good, with prices steady. We quote: Canadian Portland, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2, ex-store; American Portland, \$2.30 to \$2.40 f.o.b. Toronto.

METALS.

July is always a quiet month in the metal trade, and this year the quietness seems to be rather more pronounced than usual. One consequence of this is that though prices of sheet metals are nominally unchanged, it would be an easy matter to secure concessions in price on many lines. Bar iron is probably the steadiest line in the market, the tendency to cut prices in it being less than a week ago. Pig iron is lower all along the line.

Pig Iron—The lowering of prices in the United States has caused a slump in the quotations on Canadian iron of 50c to \$1. A moderate demand is reported.

Middlesboro, f.o.b., Toronto.....	\$18 75
Hamilton, No. 1 ".....	\$17 50 to 16 75
" No. 2 ".....	17 00 to 17 25
" No. 1, Hamilton.....	16 25 to 16 50
Midland, No. 1 ".....	17 50 to 17 75
" No. 2 ".....	17 00 to 17 25
" No. 1 f.o.b. Midland.....	16 00 to 16 50
Radnor, f.o.b. furnaces.....	27 00
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—Competition for business continues keen, yet there is not as much cutting as has been the case. We quote \$1.75 f.o.b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—Prices are steady, with an excellent trade doing. Quotations are as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—Prices are somewhat easier. Quotations are nominally unchanged, but some cutting is reported. We quote from 29 to 30c.

Galvanized Sheets—A fair trade is doing. Prices are not firmly maintained. Quotations are as follows: Queen's

Tinned Sheets Tinplates Canada Plates Polished Sheets

ETC., ETC.

FROM STOCK OR FOR IMPORT.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,
MONTREAL.



We Make

PUMPS

for every conceivable use, both hand and power.

Take a look around your town and see if any of the breweries or hotels need new pumps.

We can furnish the necessary material.

Special pumps for acids, liquors, etc.

SEND FOR CATALOGUE

McDougall Pumps
—Made in Canada.

The R. McDougall Co., Limited
GALT, ONTARIO.

"ALPHA"

HIGH SPEED STEEL

Crucible Cast Steel

for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

SHEFFIELD, ENG.

Agents for Ontario:

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Canadian Rep.

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NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tinplates—Considerable business has been done. Stocks are light. We quote: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—A fair demand is reported, with some cutting being done. Prices are steady. We quote as below: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Copper—There is not much doing. Prices are unchanged, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

Brass—There is a fair trade, with the discount steady at 15 per cent.

Lead—There is a good demand at unchanged prices. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—Stocks are light. Buying is active at 5 3-4 to 6c per lb.

Solder—There is a fair trade. Prices are 1-2c lower. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Antimony—7 1-2 to 8c per lb.

Old Material—Business is dull, no improvement being noted since last week. Stock is offered freely. Prices remain unchanged. We quote: Heavy copper and wire, 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 9 1-4c per lb.; heavy yellow brass, 8 to 9c per lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.45 per cwt.; scrap zinc, 2 1-2c per lb.; iron, No. 1 wrought, \$8 to \$9; No. 2 wrought, \$3; machinery cast scrap, \$12; stoveplate, \$9; malleable and steel, \$4; old rubbers, 4 1-2c per lb.; country mixed rags, 70c per 100 lbs.

PETROLEUM.

Trade continues to be brisk, with prices unchanged. We make the following quotations: Canadian water white, 18c; Canadian prime white, 16 1-2; American water white, 19c, ex-warehouse.

Hides, Skins and Wool.

Hides are coming in much more freely than last week. Lamb skins have advanced 5c per lb., and pulled wools and supers from 18 and 20½c to 20 and 21½c per lb., and extra from 20 and 22c to 22 and 24c per lb. We quote the following prices:

HIDES

No. 1 green, per lb.	0 08
" 2 " " "	0 07
" 1 " steers, per lb.	0 08½
" 2 " " "	0 07½
Cured, per lb.	0 08½

CALFSKINS.

Veal skins, No. 1, 6 to 12 lb. inclusive	0 10
" " " 2 " "	0 08
" " " 1 15 to 20 lb "	0 09
" " " 2 " "	0 07
Deacons (dairies), each	0 65
Sheep skins	1 00
Lamb skins	0 40

WOOL.

Unwashed wool, per lb.	0 10
Fleece wool, new clip, per lb	0 17
Pulled wools, super, per lb.	0 20
" " extra	0 22

THE BANNER
COLD BLAST

LANTERN

Always Leads
Great Light.
Wind Proof.

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We make twelve different Styles of Lanterns in Tin, Antique Copper and Solid Brass.

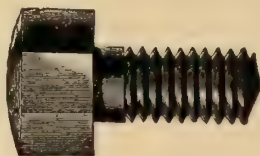
STANDARD LIGHT PRODUCERS.

FOR SALE BY ALL PROMINENT JOBBERS THROUGHOUT THE DOMINION.

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THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs,
Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.

DO IT NOW

MANUFACTURERS WISHING TO BE
REPRESENTED IN

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COMMUNICATE WITH

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470 Main St., Baker Block, WINNIPEG, MAN.

Smith's End Nipper



The jaws being inserted
can be removed when they
become dull by use by driving from the
end and replaced after being sharpened,
or new ones inserted with perfect ease.

Send for the Green Book of Hardware
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Utica Drop Forge & Tool Co.

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Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

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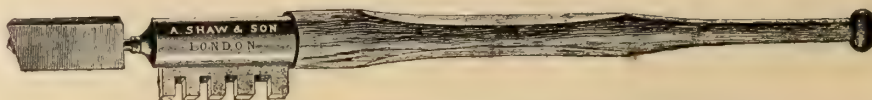
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Etc., Etc.,



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GLAZIERS' DIAMONDS



Our diamonds were first on the market and still remain first with up-to-date improvements. We claim
for them **Superiority over All Others in Quality and Workmanship.**

Glaziers' Diamonds of every description, for all purposes, supplied.

Established 1815

CANADIAN AGENT

GODFREY S. PELTON

338 St. Paul St., - Montreal

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25 Raereh St., E.C., London

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special Correspondence of **HARDWARE AND METAL.**

Vancouver, B. C., July 1, 1904.

THERE are three points of trade with Vancouver which are now being considered, and which may ultimately develop into good commercial termini of steamers sailing from this port. These are: New Zealand, Mexico, and Peru and Ecuador. The two former have been before the public previously, in that the Government has called for tenders for the Mexico line, and there has been some talk of the line to New Zealand. The latter is now taking more definite shape, and special boats may soon be on the route. As that country requires large quantities of machinery, etc., and extends a preference in tariff to Canada, there should be a considerable trade. The west coast of South America is very convenient here, and in addition to large quantities of agricultural implements, there are many other imports which might be secured from Canadian manufacturers. Mr. Carlos Palaccio, a recent arrival from there, expresses his surprise that we did not trade there, especially when there was such a good market. Mining machinery is also in good demand, and one has only to refer to the blue books to see how paying the mines are.

* * *

There has been a good demand for ship-building machinery in Vancouver this Spring, and it will continue. In all the shipyards, tugs are being constructed, and one of the finest yachts, with auxiliary steam power, is also well under way. The Government is to build a large dredge for Vancouver harbor, and plans and specifications for the tug and snagboat for Dominion Government service on the Fraser River have been opened at Victoria. The tug is to be of steel, 85 feet in length; 17 feet beam; depth of hold 12 ft. 4½ inches. The draft is not to exceed 10.5 ft., and the speed must be 10.5 on a three-hour trial. The boat will conform to Lloyd's regulations in every respect, and must be finished in six months. The snagboat will be 115 ft. long, 30 ft. beam, and six ft. deep.

The fine new vessel Fearless has been launched at New Westminster for the New Westminster Towing and Fish Co., and last evening a 60 ft. tug was launched at Wallace's yards here for local owners. This latter is the yard where the new steel ferry is being put together, the frame for which was manufactured at Polson's, Toronto, and shipped by rail west.

Railway building is creating an active demand for irons. The Great Northern has considerable construction going on in the province, and the eastern portion is particularly busy in this respect. The contracts have been let for the construction of the line from Curlew to Midway, and there are extensions to Fernie and other towns in the coal and mining districts.

* * *

An improved steam cooking vessel has been patented by M. W. Misener, of Vancouver, and the manufacture of it will be proceeded with as soon as suitable arrangements can be made. The device is adapted to hold a series of cooking vessels, through and round which steam is allowed to circulate by a simple and effective construction, which enables the heat to be evenly distributed and prevents the steam from condensing in and soddening the food. The cheapness with which the article can be manufactured ought to make it popular in small families, as several articles can be cooked at one time without the interference of one with the other.

* * *

Two or three mining propositions on the coast tributary to Vancouver are rapidly coming to the fore. The development of the properties at Van Anda, on Texada Island, 30 miles away, is disclosing some of the richest ore in the province. In fact, the Tacoma Steel Co., which has the property under bond, is clearing sufficient money each month to pay all expenses, and pay the necessary amount to purchase the property. In one month recently they cleared \$11,000, after paying the cost of operations.

Another property is the Princess Royal mine on Princess Royal Island, further up the coast. This is mainly a gold proposition also, and is being managed by Mr. F. M. Tweedie, son of Premier Tweedie, of New Brunswick. Little is heard of this and other property on the island, but both are producing good money.

* * *

Several diminutive locomotives and cars and other extensive mining equipment, comprising one of the largest shipments of machinery to go to Dawson, are at White Horse, and will be taken down the river now that navigation is opening up. These are for the syndicate represented by Otto Brenner, and the cars and locomotives are to be used in conveying pay dirt from the diggings to the stream for washing. The equipment for this one syndicate weighs 213 tons.



**OUR SHEET STEEL
PRESSED BRICK**

Is an ideal covering, either for new buildings or improving old ones.

**IT IS VERY EASILY AND QUICKLY APPLIED,
GIVES PERFECT WEATHER PROOF PROTECTION,
IS FIRE, LIGHTNING AND RUST PROOF
AND COSTS VERY LITTLE.**

Consider its fine appearance—its splendid enduring qualities and slight expense—and decide to serve your own best interests by using it.

Fuller details of information in our catalog.

METALLIC ROOFING CO., LIMITED,
Wholesale Manufacturers,
TORONTO, CANADA.

Holme, Miller & Co., of Dawson, are shipping a large number of prospecting boilers, pumps, hoists, and other such equipment to the Tanana District, and were to have had them there by one of the first boats going down the river. This new mining district is directly tributary to Dawson, and while the machinery as yet is nothing like the large boilers used in the Canadian Yukon, the trade is good. This firm is shipping only to fill orders, and not on speculation.

* * *

Excellent business conditions in the interior are indicated by the expansion of one business in Revelstoke and the starting up of another at Sandon. The Sandon Hardware Co. is the name of the new concern which is beginning in this little mining town, which ought to grow into respectable proportions before long.

At Revelstoke, Mr. W. M. Lawrence has incorporated his hardware business as a joint stock company with a strong directorate. Mr. Lawrence is one of the best and most popular business men in that city, and will continue the management. The company will take over the stock of C. B. Hume & Co., Limited, who are retiring from this branch of the business. The new organization has purchased a lot, and is erecting a substantial two-storey building of brick and stone, which will have a frontage on the main street of 50 feet. Plans are being prepared by Mr. W. T. Dalton, of Vancouver, of the firm of Dalton & Eveleigh.

PITTSBURG METAL MARKETS

From the Iron Trade Review, July 7, 1904.

PRODUCTION of pig iron, steel and finished material has been heavily curtailed by the shutting down of numerous plants throughout this district this week. The Carnegie Steel Co. has banked three stacks at Mingo Junction and two at Bellaire, while the National Tube Co. has only temporarily banked its two stacks at McKeesport. The LaBelle Iron Works has banked its furnace at Steubenville, and unless trade conditions improve materially this stack will be blown out. The Jones & Laughlin Steel Co. has also banked one Eliza furnace, making a total of nine steel works furnaces that have been added to the idle list this week. The Bessemer plants of the Carnegie Steel Co. at Mingo Junction and Bellaire are also idle, as well as the steel plant of the Republic Iron & Steel Co. at Youngstown, O. The Bessemer plant of the National Tube Co. at McKeesport is off, but will resume next week when the finishing departments at that place are expected to go on again. The steel plant of the LaBelle Iron Works continues in operation, and will operate throughout this month. The Carnegie Steel Co. is operating its mills at Homestead, Duquesne, Braddock, Pittsburgh and Youngstown, while the Shenango steel plant at New Castle continues active, despite the shutting down of the Shenango tin plate mill, containing 30 mills, and the contemplated shutting down of the Greer plant on Saturday night, this latter containing 20 mills. The Sharon tin plate plant of 20 mills is also idle, as well as the two mills at New Kensington, making a total of 63 idle tin mills of the American Sheet & Tin Plate Co. in this district. By the end of the week this will be increased to 83. The finishing mills of the Republic Iron & Steel Co. and the Carnegie Steel Co., American Steel Hoop department, are idle, although the mills of the latter in this city are running under the continuous operation scheme of the Amalgamated Association of Iron, Steel and Tin Plate Workers.

Interest in the steel market this week centres in the meetings of the rail, billet, plate and structural associations which will be held in New York on Thursday and Friday. The majority of the large steel manufacturers are opposed to any changes in existing schedules, although no absolute prediction of the action to be taken at these meetings can be made at this time. Market condi-

tions generally continue quiet, and producers whose plants are in operation are competing for the small amount of tonnage offered very keenly, with the result that ruling quotations on billets and several finished lines continue to be shaded.

Pig Iron—The number of inquiries for iron has increased to some extent during the past ten days, but not much business has as yet developed. Consumers are making offers that producers are not willing to accept, and on business for extended deliveries somewhat higher than ruling market quotations are named. On Bessemer iron consumers are not offering above \$12.40 to \$12.50, Pittsburgh, while on forge \$12.10 to \$12.15 continues to represent the market. No. 2 foundry can be had at \$12.50, Pittsburgh, although a few producers are still securing \$12.85 for special brands. Basic is quoted \$12.25 to \$12.35, Pittsburgh. In the Valleys, a large number of merchant furnaces that have been preparing to go out the past two weeks, are still working up stock, but by the middle of this month the majority of those that intend blowing out will be idle. Three steel works furnaces in this district, and six in the Ohio Valley were added to the idle list during the week, and further accessions will be this month. We revise quotations as follows:

Bessemer, Valley	\$11 60 to \$11 65
Bessemer, Pittsburgh	12 45 to 12 50
No. 1 Foundry	13 00 to 13 25
No. 2 Foundry	12 50 to 12 85
Gray forge, Pittsburgh	12 10 to 12 50
Chilled basic, Valley	11 40 to 11 50
Chilled basic, Pittsburgh	12 25 to 12 35

Bars—Demand is light and specifications on existing contracts are unusually light at the present time. While shading on steel bars is reported in other markets, the prices are being firmly maintained in this district. We quote: Bar iron, 1.25c to 1.30c Pittsburgh for local delivery, while for western shipments quotations are based on 1.25c to 1.35c Pittsburgh. Hoops are held at

1.55c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open-hearth, 1.40c; plow beams and cultivator beams, 1.35c net; channels, angles, zeos and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 lbs. of a size, not less than 1,000 lbs., 10c advance; less than 1,000 lbs. of a size, 30c advance.

Pipes and Tubes—The mills of the largest producer that are idle this week for repairs will all resume operations as soon as these are completed. The McKeesport works will resume next week. On July 1 a new list of discounts of both merchant pipe and boiler tubes was

Subscribe to the

OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish, Chemical and Drysaltary Trades.

Subscription, \$2.00 per year from date.
Sample for 10 cents.SCOTT, GREENWOOD & CO.
19 LUDGATE HILL LONDON, ENG.

SEALD TENDERS addressed to the undersigned, and endorsed "Tender for Steel Tow Boat and Tender," will be received at this office until Thursday, July 14, 1904, inclusively, for the construction of a Steel Tow Boat and Tender for the Fraser River, B.C., according to a plan and a specification to be seen at the Offices of Chs. Desjardins, Esq., Clerk of Works, Post Office, Montreal; Ph. Beland, Esq., Clerk of Works, Post Office, Quebec; H. A. Gray, Esq., Resident Engineer, Confederation Life Building, Toronto, at the Post Offices of Victoria and Vancouver, B.C., and at the Department of Public Works, Ottawa.

Tenders will not be considered unless made on the printed form supplied, and signed with the actual signatures of tenderers.

An accepted cheque on a chartered bank, payable to the order of the Minister of Public Works, for three thousand five hundred dollars (\$3,500.00), must accompany each tender. The cheque will be forfeited if the party tendering declines the contract or fails to complete the work contracted for, and will be returned in case of non-acceptance of tender.

The Department does not bind itself to accept the lowest or any tender.

By order,
FRED GELINAS,
Secretary.

Department of Public Works,

Ottawa, June 14, 1904.

Newspapers inserting this advertisement without authority from the Department will not be paid for it.

THEY CUT
WELL.

CLAUSS BRAND.

THEY HOLD
AN EDGE.

Clauss Shears, Scissors and Razors sell well and are liberally guaranteed. Enough said.

I.A. TOBIAS, THE CLAUSS SHEAR CO.,
Canadian Agent. 169 Spadina Ave., Toronto, Ont.

issued, carrying a slight revision of the former classification on merchant pipe and reductions in that line from one to three points and on boiler tubes about four points. These reductions are, however, merely meeting prevailing market quotations. Discounts to consumers, earload lots, f.o.b. Pittsburg, plus freight to destination, according to Tube Rate Book, are revised as follows:

	MERCHANT PIPE.			
	Steel.		Iron.	
	Black.	Galv.	Black.	Galv.
$\frac{1}{2}$, 1 and $\frac{3}{4}$ inch.....	70	55	69	54
1 inch.....	73	63	72	62
1 to 3 inches.....	78 $\frac{1}{2}$	68 $\frac{1}{2}$	77 $\frac{1}{2}$	67 $\frac{1}{2}$
3 to 6 inches.....	77	67	76	66
7 to 12 inches.....	72 $\frac{1}{2}$	57	71 $\frac{1}{2}$	56
Extra strong plain ends, 1 to 8 in.	69	59	68	58
Double extra strong, $\frac{1}{2}$ to 8 in.	60	50	56	46

Wire and Wire Nails—Prevailing quotations on wire products and cut and wire nails are being shaded from \$1 to \$2 per ton. No revised list was issued the first of the month, as anticipated. We make the following quotations: Wire nails, earload lots to jobbers f.o. b. cars Pittsburg, are quoted \$1.90 base; plain wire, earload lots, \$1.80 base; barb wire, earload lots, \$2.20 base; staples, earload lots, \$2.05 keg. Galvanized, 30c extra. Earload lots to retailers are held at 5c advance in all lines, and on less than earload lots a further advance of 10c is charged. Steel and iron cut nails, earload lots, \$1.75, and less than earload lots, \$1.80 f.o. b. Pittsburg, plus freight to point of destination. Terms, 60 days less 2 per cent. off in ten days.

Coke—Coke production is being greatly curtailed, both on account of the falling off in consumption in the furnace and the foundry trades, and the lower tendency of the market. The point has been reached where many of the newer producers who paid high prices for their properties are unable to compete except at a loss, and the curtailment movement now on will have to be still more rigidly carried out to stay the downward trend of the market. Contracts for strictly furnace coke for delivery the second half of the year have been closed with eastern furnaces on the basis of \$1.35, while producers are quoting \$1.40 to \$1.45 for western consumption. On foundry coke \$1.75 to \$1.90 is the prevailing range for strictly high grade product, although there are some offerings of selected furnace coke that is finding its way on the market as foundry as low as \$1.60 and \$1.65. A western smelter last week closed for the purchase of 150,000 tons of West Virginia coke for delivery the last half at a ridiculously low price. The number of idle ovens in the upper and lower regions now amounts to over 10,-

500, the H. C. Frick Coke Co. having 6,530 of its 13,981 ovens in the upper region on the idle list. In the entire upper region of a total of 23,053 ovens, 9,350 are idle, while in the lower region 1,277 out of a total of 5,659, are out of operation. During the week ending Saturday, June 25, the production of the upper region was estimated at 173,987 tons, and the lower region 51,304 tons. H and M....etaoin shr... o mlfudl

IRON AND STEEL TRADE OUT-LOOK.

IN an interview with a Londonderry correspondent, J. J. Drummond, of the Londonderry Iron and Mining Co., Londonderry and Montreal, expressed his opinion of the outlook in the iron and steel trade as below:

"Just at present it is fair, but we are getting into a time when it will require the utmost economy, both as regards labor and material, to pull through. There is, as yet, a fair demand, and prices not too bad, but it is quite plain that we are on the edge of an era of depression. The home market, especially Ontario, is becoming overstocked, flooded as it were, with foreign iron and steel. In this connection the Canadian manufacturer is placed at a great disadvantage for the reason that foreign iron, especially that from just across the line, is being placed on the Canadian market at factory prices. Remember, I am not talking politics, but let me say that nothing can be done on a large scale as regards the manufacture of iron in this country with a view to meeting this foreign slaughter goods until there is an adequate tariff. I say I am not talking politics, because I believe the question of protection, ample protection to home industries, should be taken out of politics, and made a question of patriotism, and in this respect the United States has set us a good example. Our tariff is inadequate and uncertain."

"Then the outlook is not encouraging?"

"Well, that all depends. Because, if there are further slumps in the United States we are bound to feel it here, owing to having their surplus product dumped on our markets. Even now manufacturers of iron and steel in this country are not making money, and this will become more severe as the foreign products gather in volume of accumulation on our markets."

"Will the fact of so many iron and steel workers being put out of employment by reason of the Sydney strike, effect the Canadian labor market as regards wages?"

"Yes, I think so, because, you know, the conditions are created by the principle of supply and demand."

"How, Mr. Drummond," I asked, in conclusion, "are you succeeding with your works at this place?"

"Very well indeed. To be sure things are not to our liking as yet, but they are moving rapidly in that direction. The highest point so far reached by the

furnace we have in operation is eighty-four tons a day, but in the near future we expect that the output daily will be from one hundred to one hundred and twenty-five tons. Thus far, what iron we have had to dispose of has been sold on the Maritime Provinces market at a fair price."

"In the event of present market conditions becoming more unfavorable, will you continue to operate the works?"

This question caused Mr. Drummond's face to wreath in smiles, plainly indicating that it was one that he had met before on many occasions. His reply was:

"Well, we have been up against tougher propositions, and have never yet been forced to suspend operations. Oh, yes, the works here will go on."

CONVENTION OF RETAIL MERCHANTS' ASSOCIATION.

RETAIL Merchants' Association of Canada held its fifth convention on Tuesday and Wednesday of this week, in the association rooms, 21 Richmond street west, Toronto.

The opening session on Tuesday, which was attended by a large number of delegates from outlying cities and towns, was addressed by S. Corrigan, president of the Toronto branch, and G. J. St. Leger, president of the association. Addresses in reply to the welcome were made by A. L. Geen, Belleville; B. W. Zeiman, Preston; W. Farrar, Hamilton, and S. A. Brubaker, Berlin. The speakers all expressed satisfaction with the abolition of trading stamps, and a decided objection to any schemes of a doubtful character.

Wednesday's session was occupied principally with a discussion of trading stamps and prize schemes in general.

To procure legislation covering the Police Court law, which discriminates against individual merchants and in favor of corporations, where action may be taken against them.

To abolish Federal fees for examining weights and measures of retail merchants.

To memorialize the Dominion Government not to put the metric system into operation until proper machinery is provided.

To ask for a change in the present system of charging for cartage at both ends of railway trips.

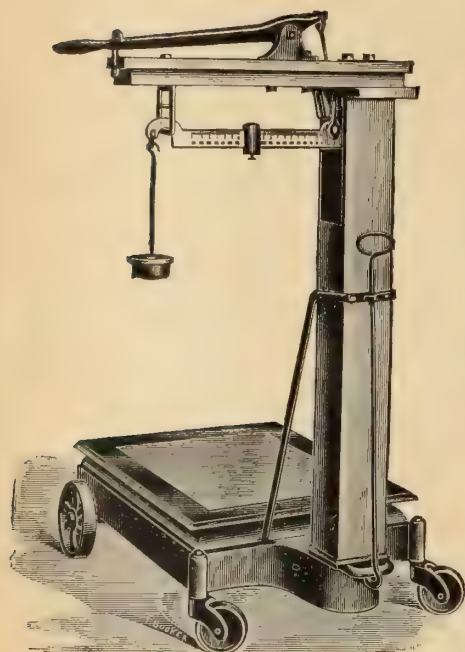
To consider increased rates of fire insurance companies.

To endorse the price contract plan to prevent price cutting.

To discover means to abolish coupon exchange tickets and other similar schemes for attracting trade.

The following officers were elected for the ensuing year: President, A. L. Geen, Belleville; first vice-president, T. F. Kingsmill, London; second vice-president, H. C. Ellis, Ottawa; treasurer, W. B. Rogers, Toronto, re-elected; secretary, E. M. Trowern, Toronto, re-elected. The convention was brought to a successful close by a banquet at the Arlington Hotel.

The Burrow, Stewart & Milne Co.'s "Champion Jewel" Scales



FITTED WITH SWIVEL CASTERS.

Can be turned without lifting in their own length, even when heavily weighted.

Far Superior to any Truck or Wagon scale (the weighing results of some of which are little better than a guess).

Thoroughly reliable and accurate.

WRITE FOR PRICES AND DETAILS.

MERRICK, ANDERSON & CO.

NORTHWEST DISTRIBUTORS,
WINNIPEG.

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL
Room 308 McIntyre Block,
Winnipeg, July 7, 1904.

FOR the past week business has been good and the jobbers report that all around trade is very bright, and the future prospects are also very encouraging. The market practically holds the price list unchanged, with the exception of turpentine, which has declined a little. We quote:

* * *

T. Eaton & Co., Toronto, have now decided to erect a large departmental store in Winnipeg, and have purchased the entire block of land fronting on Portage avenue, and extending from Donald street to Hargrave street, paying in cash for this beautiful site \$1,250,000. Some fine private residences are situated in this block, including the Strevel residence and terrace, which was bought for \$90,000 cash. It is as yet unknown as to when work will commence, but it will be within the near future, and all buildings on this property will be torn down.

* * *

The J. I. Case Co., manufacturers of threshing machinery, etc., have just purchased a \$100,000 piece of property in the City of Winnipeg, bounded by Higgins, Fonseca and Douglass avenues and May street, where they will erect a large warehouse some time this Summer.

Barbed wire, 100 lb.	\$3 15
Plain galvanized.....6 to 8	3 39
".....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91

Annealed wires (uncoiled) 10c. less.

Horsenails, 40 per cent. discount.

Horseshoes, iron, No. 0 to No. 1.....\$4 75

No. 2 and larger.....4 45

Snow shoes, No. 0 to No. 1.....4 60

No. 2 and larger.....4 45

Steel, No. 0 to No. 1.....4 45

No. 2 and larger.....4 20

Cut Nails—

2d 1 in.	\$4 10
3d Fin. 1 1/4 in.	4 10
3d 1 1/4 in.	3 75
4d 1 1/4 in.	3 50
5d 1 1/4 in.	3 50
6d 2 in.	3 40
8d 2 1/2 in.	3 25
10d 3 in.	3 20
20d 4 in.	3 15
30d 4 1/2 in.	3 10
40d 5 in.	3 10
50d 5 1/2 in.	3 10
60d 6 in.	3 10

Wire Nails—

1 in.	4 15
1 1/4 in.	4 10
1 1/2 in.	3 70
1 3/4 in.	3 50
2 in.	3 50
2 1/2 in.	3 40
3 in.	3 25
3 1/2 in.	3 20
4 in.	3 15
4 1/2 in.	3 10
5 in.	3 10
5 1/2 in.	3 10
6 in.	3 10

Bar iron (basis)	2 50
Swedish iron (basis)	4 75
Sleigh shoe steel	2 85
Spring steel	3 25
Machinery steel	3 50
Tool steel, Black Diamond, toolb.	8 50
Jessop	13 00

Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge	3 75
24 gauge	3 90
26 gauge	4 00
gauge	4 10

Galvanized Iron, Apollo, 16 gauge	4 00
18 and 20 gauge	4 00
22 and 24 gauge	4 25
26 gauge English or 28 American	4 25
28 gauge	4 50
30 gauge or 10 1/4 oz	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge	4 25
26 gauge	4 50
28	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	

Genuine Russian, per lb.	11
Imitation	07 to 08
Tinned, 24 gauge, 100 lb	8 00
26 gauge	8 05

Tinplate, IC charcoal, 20 x 28, box	9 50
" IX	11 50
" IXX	13 50

Ingot tin	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28	3 00
Canada plate, full polished	3 15
Sheet zinc, cask lots, 100 lb	7 00
Broken lots	7 50

Pig lead, 100 lb.	5 50
Black iron pipe, 1/4 inch	2 55
" 1/2	2 55
" 3/4	2 80
" 1	3 25

Black iron pipe, 1/4 inch	4 20
" 1/2	5 85
" 3/4	8 20
" 1	10 00
" 1 1/4	14 00

Rope, sisal, 7-16 and larger, basis	11 75
Manila, 7-16 and larger, basis	15 25
Lathyrum	11 25
Solder	20
Axes, chopping	\$ 6 75 to 12 00
" double bitts	12 00 to 18 00
Bluestone	5 25

Screws, flat head, iron, bright	85 and 10 p.c.
Round	80 p.c.
Flat " brass	75 and 10 p.c.
Round " "	70 and 10 p.c.
Coach	70 p.c.

Bolts, carriage, 3/4 or smaller	.60 and 5 p.c.
" 7-16 and up	55 p.c.
Bolts, machine, 1/2 and under	.55 and 5 p.c.
" 7-16 and over	55 p.c.

Bolts, tire	.60 and 5 p.c.
Bolt ends	.55 and 5 p.c.
Sleigh shoe bolts	70 p.c.
Machine screws	70 p.c.
Plough bolts	.55 and 5 p.c.
Square nuts, case lots	.3c. discount.
" small lots	.2 1/2 c.
Hex " case lots	.3c.
" smaller lots	.2 1/2 c.

Rivets, iron	.50 and 10 p.c.
Copper, No. 8	32
No. 12	36

Coil chain, 3-16 inch	9 1/2
" 1/4 inch	7 1/2
" 5-16 inch	5 1/2
" 3/4 inch	5 1/2
" 7-16 inch	4 1/2
" 1/2 inch	4 1/2
" 3/4 and 1/2 inch	4

Spades and shovels	.40 and 5 p.c.
Harvest tools	60 p.c.

Axe handles, turned, s.g. hickory, doz.	\$3 15
No. 1	1 00
No. 2	1 60
Octagon extra	2 30
No. 1	1 60
Files common	70 and 10 p.c.
Diamond	60 p.c.

Building paper :	
Anchor, plain	65c.
" tarred	70c.
Pure fibre, plain	67½c.
" tarred	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol	30 p.c.
" military	15 p.c.
American R.F.	30 p.c.
C.F. pistol	5 p.c.
C.F. military	10 p.c. advance.

Loaded shells :	
Eley's soft, 12 gauge black	15 00
chilled, 12 gauge	16 00
soft, 10 gauge	18 00
chilled, 10 gauge	19 00
Shot, Ordinary, per 100 lb	6 00
Chilled	6 55
Powder, F.F., keg	4 70
F.F.G.	5 00
Tinware, pressed, retinned.	70 and 10 p.c.
" plain	75 and 2½ p.c.
" pieced .....	.....
Japanned ware	37½ p.c.
Enamelled ware, white	45 p.c.
" Famous	50 and 10 p.c.
" Imperial	50 and 10 p.c.
Green Wire Cloth	1 55

PETROLEUM.

Water white American	27½c.
Prime white American	25½c.
Water white Canadian	25½c.
Prime white Canadian	24½c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap	5
Copper (heavy)	8½c. per lb.
Yellow brass (heavy)	7½c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead	2c. to 2½c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead	\$6 00 to \$6 50
Putty in bladder, 2½ lb., in keg of 100 lbs.	0 02½
Turpentine, pure, in barrels	\$ 87
Less than barrel lots	0 92
Linseed oil, raw	0 52
Boiled	0 55

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine	0 29
" extra engine	0 27
" dynamo	0 35
" black	0 22
" cylinder	\$0 50 to 0 75
(as to quality) .....	.....

Harness oil	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00½
" 2nd pressure	1 09½

CORRESPONDENCE

THE BRANDING OF NAILS.

Editor of Hardware and Metal: Through the medium of your valuable journal we should like to have the views of the hardware trade in regard to the antiquated method, still in use, of branding wire and cut nails, which is a survival of the days of the hand forged article.

We would suggest that kegs containing these commodities be universally branded in Canada, with lengths of their contents in inches shown in numerals; as, for example, 10dy would be 3 in., etc.

We trust that the trade will unite in having this needed change effected, inasmuch as our country will be the first to take the initiative in this matter.

H. & J. YOUNG.

Quebec, June 30, 1904.

DAVISON'S MINATURE TOOLS.

A perfect working model wrench, exact size of cut. Accurately proportioned and made exactly to scale. Handsomely nickle-plated. Sells on sight. \$2.00 per doz. Pearl Handle, \$3 00 doz.



DAVISON MFG. CO., 112 Front St., Brooklyn, N.Y.

Set Screws, Hex and Square Cap Screws, V. or U. S. S. Thread,

British made at right prices.

We stock these goods in high quality, and can make good delivery. Catalogue and discount on application.

These Products are made on 4-Spindle Automatic Screw Machines and are equal to any goods on the market, and we solicit inquiries.

THE ACME LATHE & PRODUCTS CO., Ltd.

TRAFFORD PARK, MANCHESTER, ENGLAND

STANLEY RULE & LEVEL CO.,

NEW BRITAIN, CONN., U.S.A.

IMPROVED CARPENTERS' TOOLS

SOLD BY ALL HARDWARE DEALERS.

A \$2.50 Wonder.

The Hamilton Model 19 "Take Down" Rifle actually is a mechanical marvel in metal. Beautiful in design and wonderfully accurate in its fitting and finish, it is a positive revelation of the infinite possibilities of "Gumption" when concentrated upon the perfection of a single article. No really "live" merchant can read a little "crisp" circular of our "get," describing the Hamilton Rifle, and escape the conviction that he could sell freely precisely such an admirable gun. Shall we mail you a copy of that document?

The HAMILTON RIFLE CO.,
Box No. 71. PLYMOUTH, MICH.

C.H. HENKELS PHILA.

PAINT, OIL AND BRUSH TRADES

WAR ON ADULTERATED TURPENTINE.

HIGH prices of spirits of turpentine are a strong temptation to adulterators, and accordingly it is not altogether surprising that even at the risk of detection and punishment some unscrupulous dopers at country points have shipped adulterated spirits to Savannah commission houses. The Georgia law on this subject is explicit. It requires mixers of spirits to label their packages plainly on the outside with the word "adulterated" and a statement of the percentage of adulteration. Nineteen barrels of adulterated spirits were seized by the sheriff while in the hands of consignees. The spirits were in several consignments and came from interior points in Georgia and Alabama. No blame is attached to the brokerage firms handling the adulterated stuff, as it is evident that the sophistication originated at the point of shipment. In fact, Savannah naval stores men are actively interested in maintaining the high standard of purity of the spirits of turpentine handled at that port, as required by the state law. Their efforts in that behalf have been so successful heretofore that no suspicion has attached to the quality of the turpentine shipped from Savannah, and it was, doubtless, in reliance on that good reputation that the shippers of the adulterated spirits recently seized counted on getting their spurious product past the inspector.

The Georgia pine turpentine law went into effect September 17, 1903. It provides severe penalties for the adulteration of turpentine and for offering such adulterated article for sale, unless plainly marked. The law provides that the term "spirits of turpentine" shall refer to pure spirits of turpentine distilled from rosin, turpentine gum or scrape of pine trees, and which is not mixed or adulterated with any oil or other mat-

ter affecting in any way its weight or specific gravity. In case the pure spirits are adulterated, the word "adulterated" is to be placed before the proper name, and also in case there is any oil or other substance mixed with the wood spirits. The products prepared directly or indirectly from the distillation of wood, or differing chemically from the pure spirits of turpentine, are to be known as "wood spirits of turpentine." The law was enacted through the efforts of leading factors at Savannah.—Paint, Oil and Drug Review.

Yellow Shoe Polish.

Nine parts of gallon wax are melted along with 20 parts of turpentine oil at a moderate heat, and

to the mixture are added 20 parts of hot water and 1 of ordinary soap, the whole being then stirred until cold. A second polish of the same kind may be prepared by melting 16 parts of palm oil and 48 of common soap at gentle heat, and then adding 32 parts of olein, followed by 1 part of tannin dissolved in glycerine, the whole as before being stirred till cold. Any desired shade of color darker than the original can be obtained by the use of the dyes soluble in fat that are now on the market. Should it be desired to restore the dyed leather to its initial yellow shade, all that is necessary is to wash away the wax and fat with petroleum spirit, and treat the leather with bleaching powder solution until sufficiently decolorized.—"Corps Gras Ind."

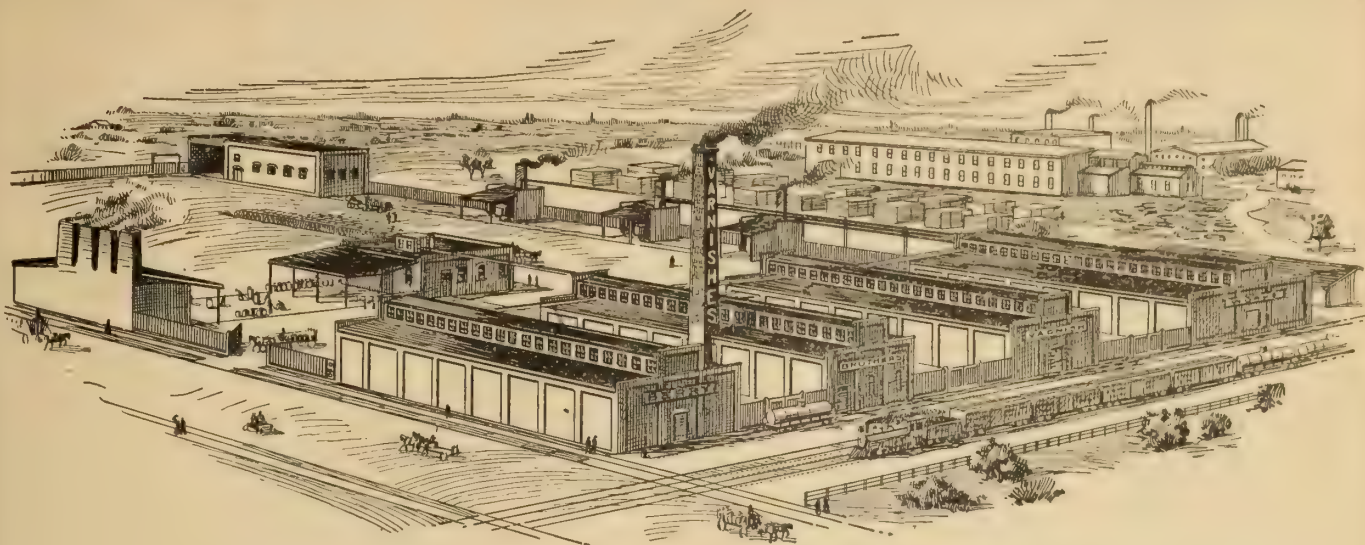
Refined Gas Tar, Coal Tar, Roofing and Paving Pitch.

Lowest Prices.

The Imperial Varnish & Color Co.

LIMITED,

TORONTO, ONTARIO, CANADA.



IT IS NEARLY
HALF A CENTURY

since we commenced to make Varnish. During this period we have acquired a knowledge not only of Varnish, but of the varied needs of varnish consumers that nothing but time can impart, and have also learned how to cater successfully to every varnish want.

Our experience belongs to those who use and sell Berry Brothers' Varnishes.

Safest goods to handle, surest and most reliable goods to use.

WRITE FOR CATALOGUE.

Berry Brothers
LIMITED

WALKERVILLE, ONT.



Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street, Montreal.
Montreal, July 8, 1904.

R EPORTS from the different manufacturers indicate that the paint and oil market is very active at the present time. Trade is good in all lines, and from all sources, there being no let-up from any one section.

Linseed oil is very firm in English markets, which may lead to a corresponding advance here just as soon as cheaper importations are disposed of. Turpentine is easier, and a decline of 1-2c a gallon is noted. Paris green is more active, and it is expected that before the season closes stocks will be rather low. No further changes in price are noted. We quote:

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

Putty—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 81 1-2c per gallon; two to four barrels, 80 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

Linseed Oil—Raw, 1 to 4 barrels, 44c to 45c; 5 to 9 barrels, 43c to 44c; boiled, 1 to 4 barrels, 47c to 48c; 5 to 9 barrels, 46c to 47c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.80

to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c; 25 lb. drums, 15 1-4c; 1 lb. packages, 16c; 1-2 lb. packages, 18c; 1 lb. tins, 17c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street, East.
Toronto, July 8, 1904.

AN advance of 3c in linseed oil has been made by several of the wholesale houses. Others have not yet raised their quotations, but it is expected that they will all put the higher prices into effect by the first of the week. Turpentine is fairly firm. Other

lines are in fair demand at steady figures.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls., 46c; boiled, 49c; 5 to 9 bbls., raw, 45c; boiled, 48c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points. Another quotation is: Raw, 1 to 4 bbls., 43c; boiled, 46c; 5 to 9 bbls., 42c; boiled, 45c; 10 barrels and over open, ex-Toronto, 2 per cent. off 30 days.

Turpentine—Single bbls., 81c; 2 to 4 bbls., 80c; 5 bbls. and over, f.o.b. point of shipment, net 30 days. Another



**COVERS THE EARTH? NO!
COVERS HOUSES? YES!**

The ambition of **ANCHOR LIQUID HOUSE PAINT** is to cover houses better than any other Paint. The ambition is realized because the only White Lead used in **ITS** manufacture is **BRANDRAM'S B. B. GENUINE**, the World's standard for Whiteness, Durability and Covering Capacity.



TRADE MARK

Nature covers the earth.

Anchor Brand Paint covers houses and other things

**HENDERSON & POTTS, Limited, Manufacturers, Halifax, N.S.
HENDERSON & POTTS CO., Limited, Manufacturers, Montreal**

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size. Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street



THE ACKNOWLEDGED
STANDARD

SOLARINE

High-grade Liquid Metal Polish. White and black forms. Both are unsurpassed. Start it in your town. It brings the business. For prices, etc., address

SOLARINE DEPOT, TORONTO.

Do you use a

Roller Awning?

If not, why not? We make the best roller awning in Canada. We can operate a 60-foot awning on one roller from one end easily and safely. Write or call for particulars. The best is none too good for you.



WM. BARTLETT & SON

Tents, Awnings and Flags

16 Adelaide St. West,

TORONTO.

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES

MONTREAL.

GLUES

of every kind, and for every purpose. Our glues enjoy large sales in almost all countries of the world, and our brands are generally to be seen amongst good stocks of glues. We believe we are giving better value than any other manufacturer, and we want to submit our lines to the Canadian test. Samples gladly sent in reply to enquiries.

GROVE CHEMICAL CO. Ltd., Appley Bridge, Lancashire, Eng.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO

MONTREAL

LONDON

OTTAWA

WINNIPEG.



Do You Sell Island City Paints?

If you don't you must be almost incorrigible, for we have been telling you for years of the profits to be made, and others have proved we are right. But we don't despair, for while there is life there is hope.—This applies to you, not the paints, for their reputation was made long ago.

P. D. DODS & CO., Montreal, Toronto, Vancouver

NEW ERA
Prepared Paint

HIGH GRADE

NEW ERA
Prepared Paint

READY FOR THE BRUSH

NEW ERA
Prepared Paint

One gallon of this paint will cover from 350 to 450 square feet (two coats), according to the condition of the surface.

There is no paint like it for beauty, durability, economy and general satisfaction.

Dealers who stock **NEW ERA** never have occasion to change to some other brand. Customers are never disappointed.

GALLONS, HALF-GALLONS, QUARTS, PINTS, HALF-PINTS.

SEND FOR PRICES.

STANDARD PAINT & VARNISH CO., Limited

WINDSOR, ONTARIO.



Paints for Machinists.
Iron Founders and
Bridge Builders.

SOLE MAKERS:

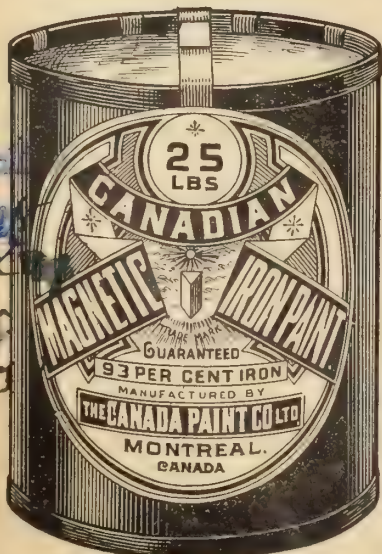
THE
**CANADA
PAINT
COMPANY**

LIMITED

MONTREAL

AND

TORONTO



quotation is: Single bbls., 83c; 2' to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

English Paris Green—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

St. John, N.B.

DEALERS advise this to be a quiet season. There has been no change in price of burning oil since the reduction, owing to the change of duty. This lower price has somewhat stimulated booking of business for Fall, and a rather larger quantity than usual up to the present has been sold. In paint oils, while there has been no change in the local market, linseed tends higher. Ruling prices have, of course, been exceptionally low. In turpentine it is just the opposite; values have ruled high, and there is an easier feeling. In lubricating oils there is practically no change. Some small lots of fish oils have arrived, but there are few buyers. There is a little old oil held here, and, being bought at higher prices than now rule, holders are anxious to work it off. While it is not thought the price will keep down as low as a few years ago,

it is expected it will be well below last year's figures.

Window Glass.

TORONTO.

A fair trade is doing at steady prices. We quote nominally as follows: Star, first break at \$3.30 per 100 feet, and Double Diamond, first break, at \$5.10. Discount, 15 and 20 per cent.

Wall Paper

Stauntons, Limited.

In addition to the regular lines of cheaper papers which this year have exceptionally good patterns, several special lines are shown. The burlap effects are new, and with their peculiar mottled appearance will be attractive. Oriental designs are prominent, and are well worked out in the colors. A fine over-thread pattern in black or gold is one of the features. Tapestries are strong. There are beautiful things shown in crown and panel effects, as well as in upper third papers of floral design, with or without the popular trellis.

Remarkable strength is shown in parlor designs, and catchy French designs are effectively worked in. A good range of embossed bronzes, and an attractive over design of floral embossed, is skillfully employed in many papers. Moires are shown in all the delicate colorings.

Brown and yellow are two colors of new effect, and drab is sure to go well. A peculiar pink is one of the exclusive shades, and odd greens and blues are features. The most delicate and careful shading characterizes the friezes. Stripes of color form attractive designs, as well as unexpected combinations of green and red, two contrasting reds, silk and gilt stripes, etc. There are some beautiful climbing rose and floral lattice work designs. A special effect is in the continuation of the stripe effect of the side wall in the frieze.

SOMETHING ABOUT CUTLERY.

ELEVEN weeks ago H. S. Howland, Sons & Co., Limited, Toronto, could not have filled one article in cutlery, having lost all their stock in the great fire which visited Toronto on April 19, but in the short period which has elapsed, through the prompt action displayed and the consideration given them by the various manufacturers, they are in a position to handle all

If You Buy

Varnishes	Paints
Japans	Colors
Lacquers	Glues
Stains	Bronzes
Fillers	Chamois
	Sponges

WRITE TO

R. C. JAMIESON & CO.

LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.



The Brush Behind the Paint

"The man behind the brush," about which we spoke in our last ad., is an important factor, but just as important is "the Brush Behind the Paint." If it is not a good one the best painter can do but poor work.

Boeckh's and Bryan's
Painters', Decorators',
and Kalsomine Brushes

Have no Equal In Canada.

They challenge effectual competition. Every painter knows this to be correct. They are therefore the best line for every dealer to carry. Once used they are their own recommendation.

Send for Descriptive Catalogue and Prices.

UNITED FACTORIES

LIMITED.

Head Office : TORONTO, Ont.

LONDON BRANCH : 71 Dundas St.



OPERATING:

Boeckh's Toronto Factories

Bryan's London Factories.

Cane's Newmarket Factories.

MONTREAL BRANCH: 1 and 3 DeBresoles St.

One of the Principal Farriers in Montreal

sent us the following letter. We give it as an example of what others have said regarding the "C" brand Horse Nails. He knows what he is talking about. We affirm that in purchasing the "C" brand Horse Nails as manufactured by this Company for the past 39 years you are positively getting the best that is made in Canada.

Montreal, June 6th, 1902.

Canada Horse Nail Company,
City.

Gentlemen :—

For the past year I have exclusively used the "C" brand Horse Nails in my shop on all kinds of work. I shoe, on an average from 30 to 35 horses daily, or 750 to 800 each month.

During that period I have never had a single accident or complaint arising from any fault of the "C" brand Nails used. I consider this an exceptional record, as our city roads are acknowledged to be the worst in Canada.

At the late Horse Show held in this city, I shod a large number of the horses exhibited, using for this work shoes ranging from 40 to 50 ounces each, and "C" brand Horse Nails—sizes No.'s 6 and 7. I did not have a single complaint from any cause, in the work done by me; either of shoes coming off, or broken or imperfect nails; or any fault which might be caused by the nails used.

I have had 30 years' experience as a practical horse-shoer, and can safely say without prejudice, that I have never during that period used a better horse nail than the "C" brand made by your Company.

I give this statement entirely without solicitation from you.

Yours respectfully,

Signed, CHARLES A. HOUGHTON.

When you order Horse Nails, state positively you want the "C" brand made by the

**CANADA HORSE
NAIL COMPANY,
MONTREAL**

cutlery orders to the satisfaction of their customers, having an entirely new and well assorted stock of the leading English, German, Canadian and United States makers. They suggest to the trade the wisdom of placing orders early for Christmas trade in cased carvers, scissors, razors, silverware, pearl goods, pocket knives, butcher knives, etc. They carry a large assortment of cutlery of the following makers: Joseph Elliot & Sons, Sheffield, whose reputation stands high amongst the first-rate makers; George Wostenholm & Sons; George Butler & Co.; E. M. Dickinson; John Askham & Son; Nixon Winterbottom; Daniel & Arter; Henry Boker & Co.; R. Wallace & Sons, and many other makers.

HEALTH'S DECALOGUE.

1. Rise early, retire early, and fill your day with work.
2. Water and bread maintain life; pure air and sunshine are indispensable to health.
3. Frugality and sobriety form the best elixir of longevity.
4. Cleanliness prevents rust; the best cared-for machines last the longest.
5. Enough sleep repairs waste and strengthens; too much sleep softens and enfeebles.
6. To be sensibly dressed is to give freedom to one's movements, and enough warmth to be protected from sudden changes of temperature.
7. A clean and cheerful house makes a happy home.
8. The mind is refreshed and invigorated by distractions and amusements, but abuse of them leads to dissipation, and dissipation to vice.
9. Cheerfulness makes love of life, and love of life is half of health. On the contrary, sadness and discouragement hasten old age.
10. Do you gain your living by your intellect? Then do not allow your legs and arms to grow stiff. —Ex.

NEW FACTORY FOR BRANTFORD.

A Brantford despatch says that the American International Harvester Company are making an effort to secure a location in that city for the purpose of manufacturing plows. They have tried to secure the \$300,000 Cockshutt factory erected last year. It is said the Deering people have made an offer of \$800,000 for the local plant, in which to make wagons for the West, and a large warehouse at Winnipeg. No acceptance has been announced.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1.000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words, each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

SITUATIONS VACANT.

TINSMITH—First-class man; at once; good on furnace work; to take charge of an established trade. Box 144, HARDWARE AND METAL, Toronto. (28)

WANTED—Good tinsmith for country shop accustomed to general job work; roofing and furnace work; wages \$2 50 per day; must be temperate; state experience. Apply to J. A. Gilhuly, Arden, Man. (28)

WANTED—For Manitoba—Experienced tinsmith; knowledge furnace work necessary. Apply, with references, to Merrick, Anderson & Co., Winnipeg. (31)

BUSINESS CHANCES.

HARDWARE business wanted in live city or first-class town of not less than five thousand population, located in good farming community. Apply Box 146, HARDWARE AND METAL, Toronto. (251f)

RETAIL hardware business for sale; one of the largest and in best location in Toronto; largely cash business; in good running order; turnover for 1903 over \$35,000; can easily be increased to \$50,000; stock and tools about \$9,000. For particulars and terms address Box 152, HARDWARE AND METAL, Toronto, Ont. (281f)

FOR SALE.

FOR SALE—\$1,600 stock of hardware, stoves and tinware, including set of tinsmith's tools; situated in first-class agricultural district in Central Ontario; will sell at a close figure. Apply Box 151, HARDWARE AND METAL, Toronto. (29)

STAMPEDENAMELED HOLLOWWARE

THE large t buyer in Europe desires to place his services at the disposal of the principal buyers in Canada; commission terms; 20 years devoted exclusively to these goods; unrivalled knowledge; unique experience. Apply Box 67, HARDWARE AND METAL, Montreal. (30)



"Pullman" Lawn Sprinkler

IS YOUR ORDER IN?

Send for Folder No.14.

PULLMAN MFG. CO.
Rochester, N.Y., U.S.A.

Have you
tried it?
Tried what?
**SELLING
MANTELS.**



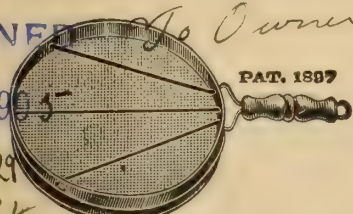
This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

RETURNED To Owner

AN 25 1905

Book 29
Page 34



PAT. 1897

The FAIRGRIEVE GAS TOASTER

Retails at 25c. The only Toaster guaranteed to toast on
gas, gasoline or blue flame oil stoves without taste or smell.
Write for prices.

THE FAIRGRIEVE MAN'FG. CO.,
295 COLLEGE ST., TORONTO.

U. S. Branch: 289 Jefferson Ave., DETROIT
Agents for Great Britain: Heine, Solly & Co., Sutton
House, 2 Old Street, London, E.C.

The Hamilton Steel & Iron Company

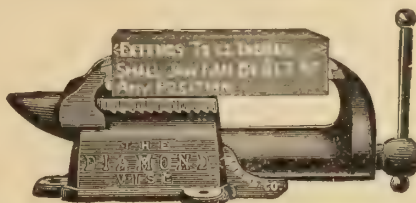
LIMITED

HAMILTON, - CANADA.

OPEN HEARTH
STEEL CASTINGS
OF ANY WEIGHT.

DIAMOND VISE AND DRILLING ATTACHMENT

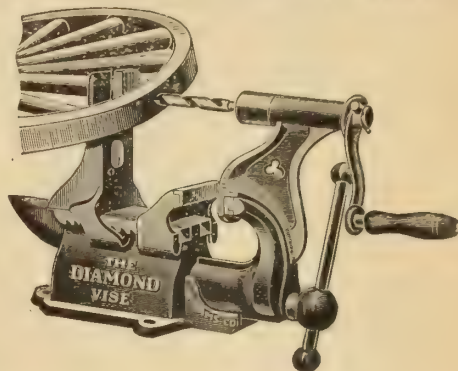
U. S. Patent Jan. 15, '95. Canadian Patent July 22, '95



JAWS are faced with steel $\frac{3}{8}$ inch wide, 4 inches long,
firmly fastened to jaw, checked and hardened.
VISE weighs 38 pounds. DRILL weighs 13 pounds.
For Sale by Jobbers of Hardware.

Made by—

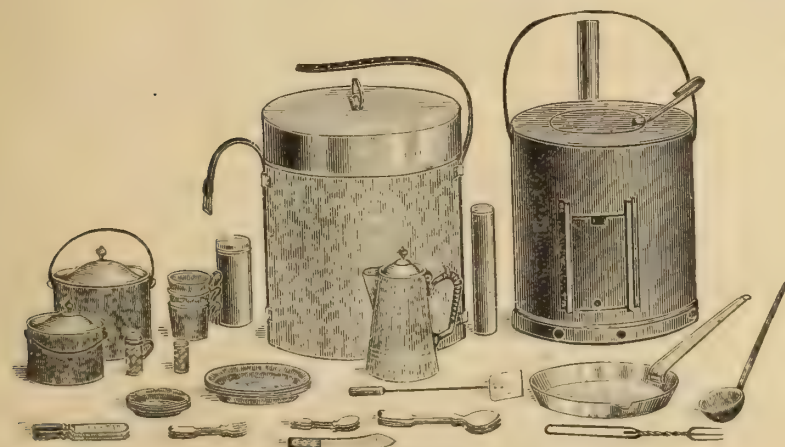
The Adams Company, Dubuque, Iowa, U.S.A.
Made by Taylor-Forbes Co., Limited, Guelph, Ont.



CAMPING OUTFITS

for Fishing and Camping
Parties, Picnics, etc.

Comprising 55 Articles, for 6 Persons.



ALSO FITTED OUT FOR 3 PERSONS.

- 1 Large Galvanized Bucket, with strap and loose cover.
- 1 Wood Cook Stove, with cover, lifter, elbow and loose bail.
- 1 Tin Fry Pan, with folding handle.
- 1 Colonial Enamelled Pail, 400.
- 1 Colonial Enamelled Pail, 800.
- 6 Colonial Enamelled Soup Plates, 9 inches.
- 6 Colonial Enamelled Dinner Plates, 7 inches.
- 6 Colonial Enamelled Mugs, loose handle.
- 6 Table Knives, good quality.
- 6 Table Forks, nickel plated.
- 6 Table Spoons, nickel plated.
- 6 Tea Spoons, nickel plated.
- 1 Salt Caster.
- 1 Pepper Caster.
- 1 Colonial Coffee Pot, 013 $\frac{1}{2}$.
- 1 Round Slip Cover Tin, 1 lb.
- 1 Round Slip Cover Tin, for cutlery.
- 1 Butcher's Knife.
- 1 Daisy Flesh Fork.
- 1 Cake Turner.

55

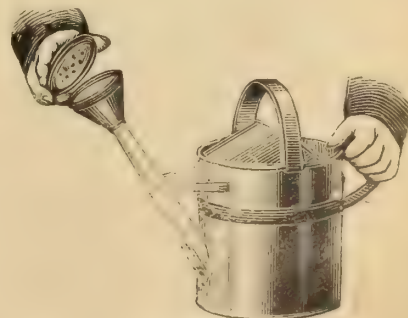
WATERING POTS Patent Rose

Plain, Japanned, Green, or Galvaniz'd.

Made in seven different sizes, from 1 to 16 quarts

The THOS. DAVIDSON MFG. CO. Limited.

... MONTREAL.



HEATING AND PLUMBING

THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, July 9, 1904.

BUSINESS in this line is first-class, and is keeping up to an extent even beyond what is usually expected. There is as yet no tendency towards a falling off, as is the case about this time of the year, due to the holiday season commencing. The reason of this is partially due to the fact of the lateness of the season, but is also due to a very considerable extent to the building activity throughout the country. Prices remain unchanged, but the remarks made concerning the unsettled state of the iron pipe trade still apply.

Range Boilers—Orders are coming in well. Prices are steady, as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—A fairly good demand is reported, with prices steady at former quotations. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs. extra; f.o.b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—Trade continues brisk. Discounts continue, as follows: Light soil pipe, 3 to 6 in., 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

Iron Pipe and Fittings—As noted last week, it is impossible to quote with exactitude, as there is no pretence that nominal prices are being maintained closely. Subject to concessions, we quote nominal prices as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent.

Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Solder—There is no noted change in the price of solder this week. Bar solder is quoted at 17 1-2c, and wire at 18c.

Soldering Irons—Prices are as follows: 1 to 1 1-2 lbs., per lb., 37c; 2 lbs. and over, 34c.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, July 9, 1904.

BUSINESS continues active in practically all lines, and as competition is still excessive there is a large amount of cutting in iron pipe, fittings and some other lines.

Lead Pipe—Business keeps up well. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—A good trade is doing at steady prices. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—There is a good trade, with cutting still prevalent. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1-2 to 70 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

Iron Pipe—The low prices noted last week still prevail. A good trade is being done at the figures. We quote f.o.b. Toronto as follows: Black pipe, 1-2 in., \$1.95; 1-4 in., \$1.95 to \$2.05; 3-8 in., \$2.15 to \$2.25; 1-2 in., \$2.35; 3-4 in., \$2.95 to \$3; 1 in., \$4.25 to \$4.30; 1 1-4 in., \$5.95 to \$6.10; 1 1-2 in., \$7.15 to \$7.40; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27; 4 in.,

\$32. Galvanized pipe, 1-4 in., \$2.70 to \$2.85; 3-8 in., \$2.90 to \$3.05; 1-2 in., \$3.20 to \$3.30; 3-4 in., \$4.10 to \$4.20; 1 in., \$5.95 to \$6.15; 1 1-4 in., \$8.30 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., 13.95 to \$14.15.

Enameled Ware—An active trade in this line continues. Though prices are firm, there is not much likelihood of an advance. We quote: "Standard," 5 1-2 feet rolled rim, first quality, at \$21.60; second quality, \$15.50 to \$16.

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

OFFICERS.

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Vice-President—Robt. Ross, Toronto.
Secretary—H. A. Knox, Ottawa.
Treasurer—F. G. Johnson, Ottawa.

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Manitoba—A. J. Hammond, Winnipeg.
British Columbia—J. McKinlay, Ottawa.

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Secretary—W. H. Meredith, Toronto.
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MONTREAL.

President—Thos. O'Connell.
Secretary—J. Gordon.

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President—Robert Ross.
Vice-President—Geo. H. Cooper.
Secretary-Treasurer—W. H. Meredith.

HAMILTON.

President—S. Mellon.
Secretary—T. H. Davies.

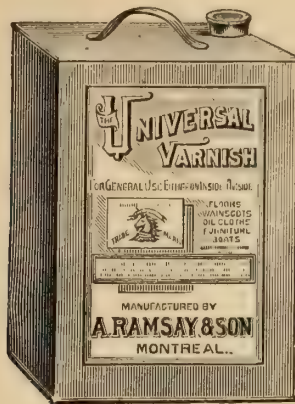
OTTAWA.

President—Gil. Julien.
Secretary—J. Thorpe Blyth.

LONDON.

President—B. Noble.
Vice-President—Wm. Smith.
Secretary-Treasurer—E. H. Russell.

Your Varnish Trade



Try a varnish that will sell and keep its reputation, while making customers for you.

Let it be a varnish already established, long tried and proved. Then you make a profit, as good varnishes pay the dealer well.

RAMSAY'S UNIVERSAL

is a seller, returns handsome profits, makes a reputation, satisfies all. It's for boats, counters, desks, doors, carriages, floors, etc.

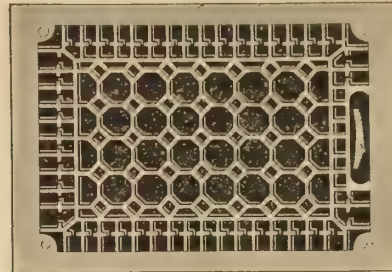
Ask for our booklet explaining about the rebate that goes with each can to your customer and how we pay it—not you.

A. RAMSAY & SON
MONTREAL

EST'D
1842

VARNISH
MAKERS

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

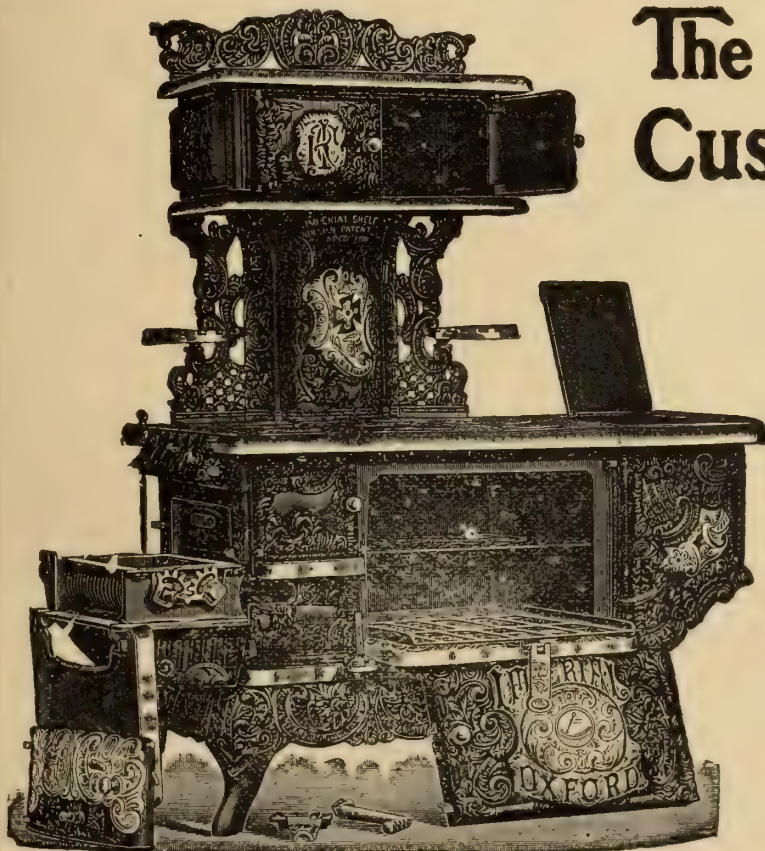
OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



The Range Your Customers Know

You'll find it harder work than ever selling any other range than the

Imperial Oxford

because no other range is so well and favorably known. The Imperial Oxford Range is really half sold when your customer comes into the store. That saves you a lot of "haggling" and it sells more ranges. Let us talk it over.

The Gurney Foundry Co., Limited,

TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., LIMITED
CALGARY, ALTA.

PRESIDENT THIBEAULT'S MESSAGE TO THE TRADE.

THE ninth annual convention of the National Association of Master Plumbers of the Dominion, will be held in Toronto on July 20, 21 and 22.

The object to which this association owes its existence is clearly set forth in Article II of its constitution. Briefly put, it signifies the introduction of excellent ways and means regarding the supply and purification of water and the discharge and disposition of sewage, the practice of which calls for the highest form of technical and mechanical training. Domestic sanitation or engineering is only overshadowed by civic sanitation or engineering. The civic officer apprehends the possibilities of his position. If a main breaks or a pump needs repair or a drain chokes, he meets the emergency; he gets extraordinary pay for his supervision because his skill and judgment cost much to acquire. The public, his master, always pays well, and in addition thereto extends a meed of praise for excellent work. The master plumber, who is the domestic engineer, never in the past justly appreciated the value of his position. He felt the responsibility, and bitterly those who have been wrecked in business may remember it. He gave his knowledge over the counter with the price of his goods, and as his time of credit with his customer is any time, and his time of credit with the supply house a limit, circumstances introduced themselves which he had to recognize and assign. By the work of the association conditions are improving. There is yet much to improve. Consolidate your association and your interests. Attacks are made from outside; long range firing from heavy guns must be resisted. Competition will remain the life of the association; individuality is inextinguishable. The lines of a legitimate profession, whose aim is the public welfare, must be controlled by those whom the public regard as the proper persons. All provincial officers will please acquaint their locals, instruct them to elect their delegates, and hereon, and on behalf of, the city of fame in which we will celebrate I welcome all master plumbers to the convention.

JOSEPH THIBEAULT,

President N. A. M. P. of Canada.
Montreal, July 1, 1904.

HINTS FROM SECRETARY KNOX.

Here are some points for delegates and visitors to the convention to remember:

1. Convention is to be held on July 20, 21 and 22.
2. Purchase first-class single ticket, and obtain from ticket agent a certi-

cate to show you are attending convention. This, on being countersigned by the secretary, will ensure round trip for a fare and a third.

3. The Iroquois Hotel is the rendezvous.

4. The Temple Building, where the association has met and done good business before, will be the place of meeting.

5. Provinces not yet thoroughly organized ought to bestir and weigh well the proposal to hold the convention triennially instead of annually.

6. All master plumbers, from the Arctic to the great lakes, and from the Atlantic to the Pacific, are welcome. The distance is no greater, perhaps, that the goods you buy have to travel. This may remind you that a visit on the side to the supply houses may make you money.

Petroleum Briquettes for Fuel.

OLIVER HUGHES, U. S. Consul at Coburg, Germany, reports that a new process for manufacturing petroleum briquettes has been invented by M. Maestracchi. The process is a simple one, consisting of mixing petroleum with three other chemicals, in the following proportions: Petroleum, 1 liter; soft soap, 150 grains; resin, 150 grains; caustic soda lye wash, 300 grains. The mixture is then heated and well shaken, after which it is allowed to solidify. The operation occupies about forty minutes. Care has to be observed to prevent the liquid running over, and this is achieved by pouring a small quantity of soda into the vessel, and shaking it well, until solidification is completed. The mixture is then run into briquette moulds, of the requisite size, and these are then submitted to a furnace heat for ten or fifteen minutes. The briquettes are then set aside to cool, which occupies an hour or two, when they are ready for use. If it is desired to make them more solid, this can be accomplished by the addition of sawdust to the mixture. Experiments have demonstrated that these briquettes yield three times as much heat as ordinary coal. They are lighter in bulk, and easier to carry, and what is more important, after consumption there is very little ash or other residue.

Building Permits.

MONTREAL.

A. Jean, St. Timothee street, six dwellings, \$8,000.

George Monette, Trudel lane, two dwellings; \$1,800.

L. St. Martin, Hermoine street, three dwellings; \$2,000.

Wilfred Larose, on Chambord street, two dwellings, \$1,200.

Proulx & Damien, Chambord street, three dwellings; \$2,000.

J. Rheaum, Bayer street, alteration on one warehouse, \$2,500.

Hart & Adair, Ann and Wellington streets, alteration on stable; \$3,000.

Bank of Montreal, corner of Davidson and Nolan streets, one building, \$17,000.

Merchants' Bank, three-storey building, corner St. Catherine and Fullum streets, \$25,000.

Notre Dame Hospital, Maisonneuve, one building, \$1,420; one building, \$20,927; one building, \$43,920; and two buildings, each, \$23,300.

TORONTO.

Jas. Buck, dwelling on New street, \$2,000.

T. Butler, dwelling on Manning avenue, \$1,000.

G. Davison, dwelling at 110 Walmer road; \$5,500.

T. W. Murray, dwelling on Spencer avenue, \$5,500.

T. W. Murray, dwelling on Jamieson avenue; \$5,750.

Thos. Steels, dwelling on Albany avenue, \$1,000.

Adam Stewart, dwelling on Franklin avenue; \$1,400.

E. R. Gardner, dwelling on 65 McCaul street; \$6,000.

F. W. Cox, dwelling on Brooklyn avenue; \$1,600.

E. P. Roden, dwellings on Ulster street; \$4,500.

S. G. Bentley, dwellings on Lucas street; \$2,000.

J. M. Davidson, dwelling on Roxboro avenue; \$4,100.

Chas. Turp, dwelling on Symington avenue; \$1,000.

W. N. McEachren, dwelling on Ossington avenue; \$2,800.

J. S. VanCamp & Son, dwellings on Langley avenue; \$2,600.

Pure Gold Mfg. Co., factory at 381 College street; \$25,000.

Richard Reed, eight dwellings on Jones avenue; \$6,000.

J. B. LeRoy & Co., dwellings on Broadview avenue, \$4,400.

G. W. Townsend Laundry Co., laundry on Jarvis street; \$2,000.

Dominion Bank, bank building on corner Yonge and Cottingham streets, \$30,000.

P. McIntosh & Son, elevator building on corner of Yonge and Cottingham streets; \$6,500.

P-H

**"CROWN" BRAND
PIPE.**

PIPE THAT IS PIPE

NIPPLES and COUPLINGS WITHOUT A FLAW.

Every Nipple has precisely the same number of threads on each end.

All threads cut absolutely to Brigg's Standard Sizers.

All Nipples made from **P-H** Crown Pipe and not from scrap.

It pays abundantly to use them.

Page-Hersey Iron & Tube Co., Limited, Guelph, Can.

MAKERS OF WROUGHT IRON PIPE.

Westmoreland Methodist Church, a church at 275 Westmoreland avenue; \$1,700.

E. Baynes, dwelling at 542 Givens street; \$1,700.

Wm. Webster, dwelling on Euclid avenue; \$4,000.

Mr. Christholm, dwellings on Montrose avenue; \$4,000.

W. H. Williams, dwellings on Bis-mark avenue; \$9,000.

A. M. Stewart, dwelling on Crawford street; \$1,800.

M. McClelland, dwelling on Arthur street; \$2,800.

Wm. L. Marshall, dwellings on Delaware avenue; \$3,700.

Standard Woolen Mills, addition to factory on Front street east; \$1,000.

J. J. Main, dwelling on corner of Prince Arthur and Bedford road; \$8,500.

Building Notes.

A new fire hall is to be erected in Calgary, N. W. T., to cost \$1,000.

The new Methodist church in Monkton, Ont., to cost \$7,000, has been commenced.

The T. Eaton Co., Toronto, are contemplating the erection of a building in Winnipeg.

Excavation work has been commenced for the warehouse of the Ontario Wind Engine & Pump Co., Toronto, in Winnipeg.

The Winnipeg Lodging and Coffee House Association, Winnipeg, are discussing the question of erecting a new building in that city.

We make Electric Fixtures, Sockets and Cut-Outs

Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.



Write To-day for Our Proposition

On bathroom appliances and lavatory fixtures. We are headquarters for everything used in the bathroom from the finest tubs to the smallest fixture. Our prices and the quality of our goods are both most attractive.

JAS. MORRISON BRASS MFG. CO., LIMITED
TORONTO, ONT.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE Barchard planing mill and box factory, Duke street, Toronto, has been damaged by fire to the extent of \$2,000.

* * *

The Pittsburg Coal Co. have selected a 35 acre site for the coal handling plant they propose to erect in Fort William. The proposed plant will have a capacity of 1,000,000 tons. The company intend to make Fort William the distributing centre for the west. In connection with the plant there will be erected a traffic and railroad bridge across the McKellar River.

* * *

The carriage factory of E. Borland, Tillsonburg, and that of the Stratford Carriage Co., Stratford, are to be amalgamated. The amalgamated company will build in Stratford. The main building will probably be 150x60 feet, and four storeys high. The blacksmith shop will be 100x50 feet, and there will also be the drying kiln. Building operations will be commenced at once in order that the factory may be completed by the Fall.

* * *

W. C. Hawkins, general manager of the Hamilton Radial Electric Railway Co., is calling for tenders for the preparation of the roadbed for the proposed Oakville extension of that railway. Work embraces clearing, grading, fencing, excavation, embankments, bridge piers and abutments in concrete and stone work. Plans and specifications may be seen at the Hamilton office of the company. The time for the tenders extends to July 15.

* * *

During the month of June 84 permits were issued at the City Hall, in Montreal, to erect new structures, representing a value of \$373,827. These were for sixty-two houses, containing 122 dwellings, five stores, one office building, four hospitals, three stables, and seventeen sheds. There were fifty-nine permits issued for alterations, for forty-eight houses, containing fifty-four dwellings, and for twenty-two stores, two warehouses, three factories, three stables and eight sheds, to cost in all \$45,458.

E. H. Carter, inspector of mines, at present in New Ontario, says that the Canadian Copper Co. are now operating the Creighton and Copper Cliff nickel mines, and that the Mond Nickel Co. is operating the North Star nickel mine. The Creighton mine is raising from 800 to 900 tons of ore per day. The Vermillion mine, which has been idle for 7 years, is now being developed, the ore being rich in nickel and copper. The Shakspeare gold mine at Webbwood is also being operated successfully. Mr. Carter also reports that the water powers in the vicinity are being developed to supply Sudbury with electrical power.

* * *

T. W. Gibson, director of the Bureau of Mines, received a report yesterday from New Caledonia, the penal French Island, which is practically the only nickel-producing territory outside Ontario, and it shows that the nickel industry there is not in a flourishing condition. While in 1902 the island produced 129,653 tons of nickel ore, it raised only 77,360 tons in 1903, which is only about half of the output of the Copper Cliff, Ontario, mines. New Caledonians openly attribute the falling off to the competition of the Ontario mines, at which they take a revengeful slap by saying that while they can produce cheaper nickel, it is of an inferior quality, which, Mr. Gibson says, is an entirely unwarranted statement.

* * *

R. L. Newman, member of the British Institute of Naval Architects, and of the Society of Naval Engineers, formerly general manager of the Globe Iron Works, Cleveland, O., has been paying Victoria, B. C., a visit. While there he was struck with the many advantages that city possessed for a great manufacturing centre, especially in the iron and steel line. Especially did he think Victoria well adapted for ship building purposes, in which industry he is interested, and was surprised that no more had been done in that line than is being done at present. The abundance of coal, coke and iron found on Vancouver Island forms a basis upon which immense iron and steel industries may be developed. Mr. Newman is so taken with the natural resources of Vancouver Island that he has started negotiations which

will, it is expected, end in the establishment of a large ship building industry in Victoria.

NOTES.

It is reported that the Deering Harvester Co. are negotiating for the purchase of one of the largest factories in Brantford.

The wood working factory of E. Robichaud at Meteghan River, N. S., has been destroyed by fire. The loss is estimated at \$10,000.

The Town of Oshawa, Ont., has passed a by-law granting a \$10,000 loan and ten years' exemption from taxation to the Canadian Saddlery and Harness Mfg. Co., Limited, Toronto.

The authorities of Notre Dame Hospital, in Montreal, are about to commence the building of five new hospital buildings in Maisonneuve. These buildings will cost about \$110,000.

The construction of the new furniture factory of Walker & Clegg, Wingham, is progressing very favorably, and it is expected that within a month or so the factory will be in running order.

The sawmill, planing mill, the sash and door factory, of J. B. Atchison, Cornwall, Ont., together with 300 feet of lumber, have been destroyed by fire. The loss is estimated at \$40,000, with no insurance.

The planing mill of W. Eizerman, Mitchell, Ont., has been partially destroyed by fire. The machinery in the second flat was totally destroyed, while that in the lower flat was injured but slightly. The stock was destroyed. The total loss is said to be \$4,000.

One of the signs of the times in Montreal is the large number of new banks that have been built this season. Two more are just about to be commenced in the east end, one by the Merchants' Bank, to cost \$25,000, and one by the Bank of Montreal, to cost \$17,000.

The extensive planing mills of the St. Catharines Box & Lumber Co., St. Catharines, Ont., have been destroyed by fire. The loss is estimated at between \$45,000 and \$50,000, with insurance of \$30,000. The Parry Sound Lumber Co. were partial owners of the property.

An American company of capitalists are negotiating with several Canadian cities and towns for the establishment of an industry in which funds to the extent of \$100,000 will be invested. The Brantford Courier says that Brantford will probably make some offer to the company.

The blacksmith shop and the iron shed in connection with the wagon works of Geo. McFarlane, Nashwaaksis, N. B.,

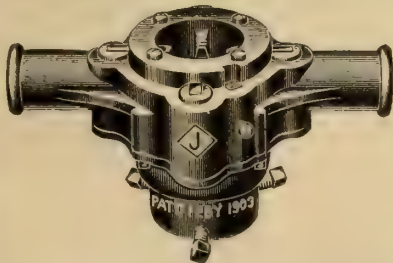
CHARLES BAYNES, - England.
MAKER OF THE **CLICK-CLACK**
HACK SAW BLADES.
In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited
HANOVER, ONTARIO.
Manufacturers of **"Saugeen Brand"**
OF PORTLAND CEMENT.
Prices on application.

"THE EMLYN" SAW BENCH
Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—
CHARLES D. PHILLIPS,
Cables— "Machinery," Newport. Emlyn Engineering Works NEWPORT, MON., ENGLAND

Will Hold Up a Shelf !
That's what a shelf bracket is for.
For this purpose there can be **NOTHING BETTER, NOTHING CHEAPER** than the **BRADLEY STEEL BRACKET.** It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.
ATLAS MFG. CO.,
New Haven, Conn., U.S.A.

To Manufacturers' Agents
Hardware and METAL has inquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.
Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of inquirers in our various offices throughout Canada and in Great Britain without charge.
Address
Business Manager
HARDWARE AND METAL
Montreal and Toronto



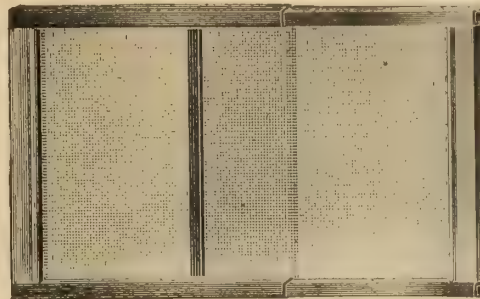
It is a fact that one man with our **PATENT PIPE DIE** can easily do the work of two men with any other. Send us your address and we will explain **HOW** and **WHY.**

A. B. JARDINE & CO.
Mfrs. TAPS and DIES.
HESPELER, ONT.

PIG IRON FOR IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.



Canadian Patent, March 17, 1903.



U. S. Patent, January 26, 1904.

DO.

Sell the best goods. Our Metal Window Screens are vastly better than the wood-framed kind, and they cost not a penny more. Then why sell the poorer wood kind?

SEND FOR BOOKLET AND PRICE LIST.

C. M. Cutts & Co., Makers
Toronto Junction.



Pedlar's "Perfect" Metal Lath

CHEAP AS WOOD

Delivered to any railway station in Canada, for 10c. per square yard. Discount to dealers. Circulars and samples on request.

Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal, Que.

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PRICES
RIGHT**

GALVANIZING

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WIND
ENGINE & PUMP CO.
TORONTO, ONT. LIMITED.**

Order a stock of

"Windmill Best" Galvanized Sheets

Cut Prices. Made by Quality Right

John Summers & Sons, Ltd.
STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

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GILMORE GRATER

(PATENTED.)



Made on an entirely new principle. Cuts only on the down stroke; grates anything that can be grated; does not clog up and will grate as much in five minutes as an ordinary grater will in half an hour.

Each grater wrapped separately.

E. T. Wright & Co., Hamilton, Canada.
SOLE MANUFACTURERS.

MODERN MAGIC!



No more matches required to light the gas.
The "Ignito" Mantle lights when the gas is turned on.
Write for booklet and samples.

The **International Gas Appliance Co., Limited**
164 BAY STREET, TORONTO, Canada

have been destroyed by fire. The power plant and its contents were also destroyed. The loss will amount to \$3,000 probably, while there was only \$200 insurance of the building.

COMPANIES INCORPORATED.

The Megantic Mining & Dredging Co., Limited, Montreal; capital, \$800,000; purpose, to carry on a mining business. The directors are: T. Doucet, L. Sohier, J. S. Buchan and E. W. H. Phillips, all of Montreal.

The Canadian Hansa Cement Co., Limited, Montreal; capital, \$500,000; purpose, to manufacture and deal in cement. The directors are: H. Edmunds, London, Eng.; R. L. Dillon, A. P. Dillon, W. P. Sharp, and R. C. McMichael, all of Montreal.

The Port Arthur Bazaar, Limited, Port Arthur; capital, \$40,000; purpose, to carry on a general manufacturing business, and also that of a general merchant. The directors are: H. G. Greenland, W. H. Butcher, W. G. Bartlett and R. C. Bush, all of Port Arthur; and I. Publow, Fort William.

Zwicker & Co., Limited, Lunenburg, N. S.; capital, \$150,000; purpose, to acquire the business of Zwicker & Co., and the hardware business of W. N. Zwicker. The officers of the company are: W. N. Zwicker, president; A. H. Zwicker, managing director; W. N. Zwicker, vice-president; E. F. Zwicker, secretary.

LICENSES GRANTED.

The Ashland Emery & Corundum Co., incorporated in New Jersey, to carry on their business in Ontario.

The Lake Ontario Navigation Co., Limited, incorporated under the laws of the Dominion of Canada, to carry on their business in Ontario.

The Kearney Timber and Mfg. Co., Limited, incorporated in Great Britain, to carry on the business of timber merchants in Ontario.

CARLOAD OF FILES.

The Nicholson File Co. shipped from their Dominion works last week a carload of files to England, consigned to prominent merchants in that country. In interviewing their sales agent, Walter Grose, Montreal, it was learned that these files are being sold in direct competition with the best English and French makes. There is a growing demand in Europe for increment cut files, which will cut quick and give good service. The fact that these goods are manufactured by the Nicholson File Co. is a sufficient guarantee that the goods are of a superior quality, and will find a ready sale, while the demand will steadily increase for their "Maple Leaf" Brand, manufactured only at their plant in Port Hope.

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

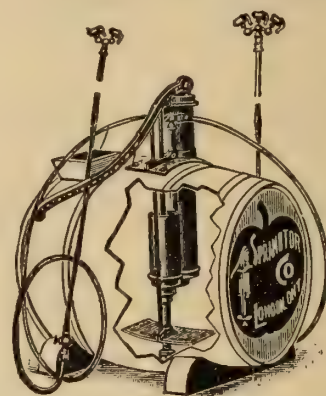
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Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

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Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP
Warren White Sulphur Springs,
Totten P.O., Virginia



THE SPRAMOTOR

is recognized by the users as the most durable and efficient apparatus yet invented, for the

Prevention of blight and bugs on fruit and potatoes.

For the destruction of wild mustard in the grain crops without injury to the grain, and for

The painting of buildings.

Has been awarded First Place by the Canadian Government in actual contest, and

The Gold Medal at the Pan-American.

The Trade fully protected.

Write for particulars and discounts. Terms liberal.

THE SPRAMOTOR CO.,

68-70 King St., - - - LONDON, CAN.



METAL SKYLIGHTS and WINDOW FRAMES

Glazed with FIREPROOF GLASS.

CORRUGATED IRON and FIREPROOF DOORS

ROOFINGS, CORNICES and CEILINGS

A. B. ORMSBY LIMITED,
MANUFACTURERS AND CONTRACTORS,
Cor. Queen and George Streets,
TORONTO, ONT.

FULL STOCK

Salt Glazed Vitrified

Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
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PORTLAND CEMENTS

Best German, Belgian and English
Brands.FIRE BRICKS
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CALCINED PLASTER
WHEELBARROWS
MORTAR STAINS.A Full Stock of Builders' and Con-
tractors' Supplies.

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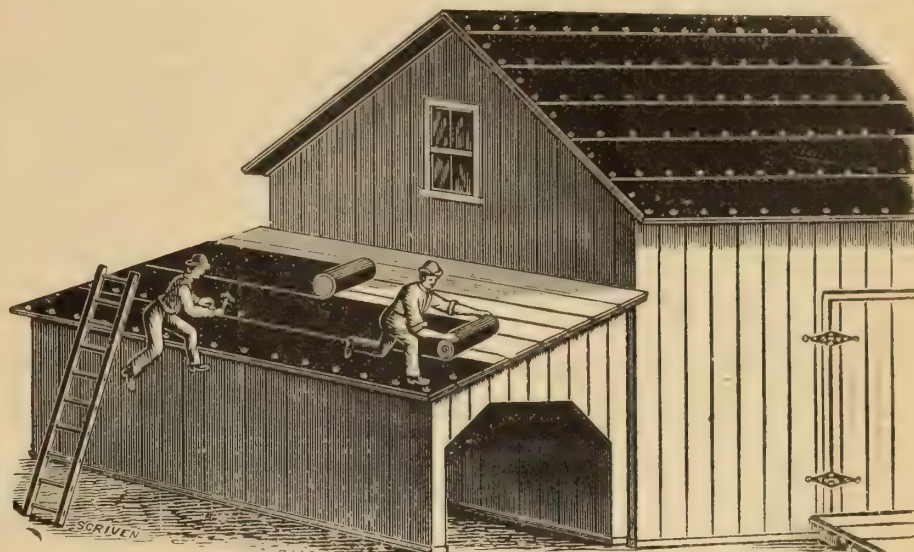
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Write for our quotations.

A PERMANENT
and Handsome Roof.

Arrow Brand Asphalt Ready Roofing.

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

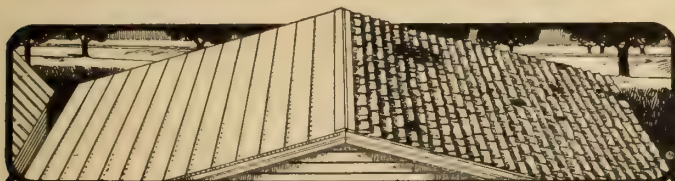
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Sole agents being appointed in each district. Write today.

USE MICA ROOFING

For Flat or Steep Roofs. It is Waterproof,
Fireproof, quickly and very easily laid, and
cheaper than other roofing.

HAMILTON MICA ROOFING CO.,

60 Catherine Street North, - - - HAMILTON, CANADA.

CONSTRUCTION vs. DESTRUCTION.
CARE vs. CARELESSNESS.
BEST MATERIAL vs. POOR MATERIAL
REX FLINTKOTE ROOFING vs. ALL OTHER ROOFING.TRADE MARK
REX Flintkote Roofing

The above tells the whole story, and means to the dealer a quick-selling, business-bringing roofing vs. the ordinary kind that never sells, because people don't want it, and when they are persuaded to try it never come back again. If you want satisfied customers for roofing, you should write us to-day about Rex Flintkote Roofing.

J. A. & W. BIRD & CO., 49 India Street, Boston, Mass.

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ETC., ETC., ALWAYS ON HAND

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Building Papers, Fibre and Manilla Wrappings, etc.,

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JOLLIETTE, QUE.

CURRENT MARKET QUOTATIONS.

July 8, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

TIN PLATES.

Charcoal Plates—Bright.
M.L.S., equal to Bradley— Per box.
I C, usual sizes. \$6 50
I X " 8 00
I X X " 9 50
Famous, equal to Bradley—
I C 6 75
I X 8 25
I X X 9 75

Raven and Vulture Grades—
I C, usual sizes. 4 25
I X " 5 00
I X X " 5 75
I X X X " 6 50

"Dominion Crown Best"—Double
Coated, Tissue. Per box.

I C 5 50
I X 6 50
I X X 7 50
Allaway's Best—Standard Quality.
I C 4 50
I X 5 50
I X X 6 50

Coke Plates—Bright.

Bessemer Steel—
I C, usual size, 14x20 3 35
I C, special sizes, base 3 60
20x28 7 10

Charcoal Plates—Terne

Dean or J. G. Grade—
I C, 20x28, 112 sheets 7 50
I X, Terne Tin 10 50

Charcoal Tin Boiler Plates.

Cookley Grade—
X X, 14x56, 50 sheet bxs. } 7 00
" 14x60, " }
" 14x65, " }

Tinned Sheets.

72x30 up to 24 gauge. 7 25
" 26 " 8 00

IRON AND STEEL.

Common bar, per 100 lb. 1 80
Refined " 2 20
Horseshoe Iron " 2 25
Hoop steel, 14 to 3-in. base 2 75
Sleigh shoe steel, " 2 10
Tire steel " 2 30
T. Firth & Co.'s tool steel, per lb 0 12 1/2
B. K. Morton & Co.—
" Alpha " tool steel. 0 70
" M " Self-Hardening. 0 60
" I " Standard. 0 14
Jessop's high speed steel. 0 90
" standard tool steel. 0 14
" crucible sheet steel. 0 14
" Chas. Leonard's tool. 0 08
Crucible Steel Co.—
" Black Diamond. 0 10
" Silver steel. 0 13
" Special. 0 17
" Rex high speed steel. 0 65
" Self-Hardening. 0 45
Sanderson's Crucible Tool. 0 09
" Superior. 0 12
" Extra And. 0 13
" Self-Hardening. 0 45
" Rex high speed. 0 65
Jonas & Colver's tool steel. 0 10
" "Air Hardening. 0 70
Drill steel, per lb 0 08

RABBIT METAL.

"Tandem," A per lb. 0 27
" B " 0 21
" C " 0 11 1/2
Frictionless Metal " 0 23

Syracuse Smelting Works:

Aluminum, genuine. 0 45
Government, " 0 44
Tough, " 0 40
Hard, " 0 40
Dynamo. 0 30
Special. 0 25
Harmony. 0 22
Car Box. 0 20
Extra. 0 15

The Canada Metal Co.:

Imperial, genuine. 0 40
Metallic. 0 30
Hercules. 0 20
Star. 0 15
No. 1. 0 10
No. 2. 0 10
No. 3. 0 06
No. 4. 0 05

Geo. Langwell & Son.

No. 1. 0 08
No. 2. 0 07
No. 3. 0 05 1/2
Extra. 0 09 1/2

BLACK SHEETS.

Montreal. Toronto.
10 and 16 gauge. 2 25 2 50
18 gauge. 2 30 2 50
20 " 2 30 2 50
22 to 24 gauge. 2 35 2 70
26 " 2 40 2 80
28 " 2 40 2 90

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary. 2 60
All bright. 3 50
Galvanized Canada Plates—

Ordinary. Dom. Crown.

18x24x52. Ingot. 4 25 4 35
" 60 " 4 50 4 60
20x28x80. " 8 50 8 70
" 94 " 9 00 9 20

GALVANIZED SHEETS. Queen's
Fleur-de-Lis. Gordon Crown. Comet Bell. Head

16 gauge. 3 65 3 75 3 75 3 75
18 to 24 gauge. 3 75 3 75 3 75 3 75
26 " 4 00 4 00 3 90 4 00
28 " 4 25 4 25 4 05 4 25

American brands, \$4.00 for 28 gauge.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 5-16 " 5 60
" 7-16 " 4 45
" 9-16 " 3 85
" 11-16 " 3 70
" 13-16 " 3 55
" 15-16 " 3 45
" 17-16 " 3 35
" 19-16 " 3 25
Halter, kennel and post chains, 40 to 40 and
5 per cent.
Cow ties. 40 p.c. 65 p.c.
Tie out chains. 65 p.c.
Stall fixtures. 35 p.c.
Trace chain. 45 p.c.
Jack chain, iron, single and double, discount
35 p.c.
Jack chain, brass, single and double, dis-
count 40 p.c.

COPPER.

Ingot. Per 100 lb.
Casting, car lots. 13 75
Bars.
Cut lengths, round, 1/2 to 3/4 in. 21 00 23 00
" round and square,
1 to 2 inches. 21 00 23 00

Sheet.

Plain, 16 oz., 14x48 and 14x60 20 00
Plain, 14 oz. 21 00
Tinned copper sheet. 24 00
Planished. 32 00

Braziers' (in sheets).

4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 " 0 21
" 50-lb. and above " 0 20

BOILER AND T.K. PITTS.

Plain tinned, per lb. 0 28
Spun, per lb. 0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4 0 23
Tubing, base, per lb. 0 23 1/2

ZINC SPELTER.

Foreign, per 100 lb. 6 00 6 25
Domestic " " " "

ZINC SHEET.

5-cwt. casks. 6 15 6 50
Part casks. 6 50 7 00

LEAD.

Imported Pig, per 100 lb. 3 20 3 30
Bar, per lb. 0 07
Sheets, 2 1/2 lb. sq. ft., by roll. 0 06 1/2
Sheets, 3 to 6 lb. " 0 06

NOTE.—Cut sheets 1c. per lb., extra. Pipe,
by the roll, usual weights per yard, lists at 7c.
per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe
8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's. per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00
per 100 lb.; buck, seal and ball, \$7.50. Dis-
count, 17 1/2 p.c. Prices are f.o.b. Toronto,
Hamilton, Montreal, St. John and Halifax.
Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.

Zinc. 6 00
Copper, discount 20 per cent. off revised list.

BATHS.

Standard Enameled.
5 1/2-ft. rolled rim, 1st quality. 21 60
" 2nd " 15 50

CLOSETS.

Fittings. Net.
Plain Simplex Syphon Jet. 1 00
Emb. 9 50

Fittings. 1 25
Low Down Elgin or Leutonic, plain. 6 00
Low " emb. 6 50
Connection. 1 25
Plain Richelieu. 4 25
Emb. 4 50

Connections. 1 25
Basins, P.O., 14-in. 0 63
Basins, oval, 17 x 14-in. 1 50
Basins, " 19 x 15-in. 2 00

IRON PIPE.

Black pipe— Per 100 feet.
1/2 inch. 1 95
3/4 " 2 05
1 " 2 15
1 1/4 " 2 25
1 1/2 " 2 35
2 " 2 45
2 1/2 " 2 55
3 " 2 65
3 1/2 " 2 75
4 " 2 85
4 1/2 " 2 95
5 " 3 05

Galvanized pipe—

1/2 inch. 2 88
3/4 " 3 11
1 " 3 42
1 1/4 " 4 40
1 1/2 " 6 35
2 " 8 80
2 1/2 " 10 75
3 " 14 80

Cast Iron Fittings—Discount 20 p.c.

Standard, 57 1/2 per cent.; unions, 55 per cent.;
on nipples, headers and flanged unions, 60
per cent.

PLUMBERS' BRASS GOODS.

Standard Compression work, dia. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra dis-
count 10 per cent.

Lever handle Stops and Waste, discount 60
per cent. With in lots of 2 dozen and over,
an extra discount of 10 per cent.

J.M.T. Globe, Angle and Check Valves, dis-
count 55 per cent.

Standard Globe, Angle and Check Valves,
discount 60 per cent.

Kerr's special standard globes and angles,
discount 60 per cent.

Kerr's Jenkin disc, copper-alloy disc and
heavy standard valves, discount 60 per cent.

Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator
valves, discount 70 per cent.

Kerr's Jenkin disc, copper-alloy disc radi-
ator valves, discount 70 per cent.

Kerr's quick-opening hot-water radiator
valves, discount 70 and 10 per cent.

Weber's (Kerr) patent straightway gate
valves, brass, discount 55 per cent.

Weber's (Kerr) patent straightway gate
valves, I.B.B.M., discount 70 per cent.

J.M.T. Radiator Valves discount 55 per cent.
Standard Radiator Valves, discount 60 per
cent.

Patent Quick-Opening Valves, discount 65
per cent.

No. 1 compression bath cock. net 1 75

No. 4 " " 1 90

No. 7 Fuller's " " 2 10

No. 4, " " 2 25

Patent Compression Cushion, basin
cock, hot and cold. per doz. 15 00

Patent Compression Cushion, bath
cock, No. 2208. " 2 25

Square head brass cocks, discount 55 per cent.
iron " 50 to 60 "

Thompson Smoke-test Machine \$25.00

RANGE BOILERS.

Copper, 30 gallon. " 22 00

" 35 " 24 00

" 40 " 28 00

Discount off copper boilers 15 per cent.

SOID PIPE AND FITTINGS.

Light soil pipe, discount, 50 per cent.

" fittings, discount 50 and 10 p.c.

Med. and Extra heavy pipe and fittings, dis. 60
per cent.

7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.

Bar, half-and-half, guaranteed. Per lb. 0 19

Bar, half-and-half, commercial. " 0 18

Refined. " 0 18

WRENCHES.

Acme, discount 35 to 37 1/2 per cent.

Agricultural, discount 60 per cent.

Coe's Genuine, discount 20 to 25 per cent.

Towers' Engineer. each 2 00 7 00
" S. " per doz. 5 80 6 00
G. & K.'s Pipe. " 3 49
Burrell's Pipe. each 3 00
Pocket. per doz. 0 25 2 99

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE CALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French "	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt.	Less than this quantity 1-c. extra.
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 95 p.c.	2 00
Burnt sienna	9 00
" umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Pure	Per 100 lb.
No. 1	4 75
No. 2	4 50
No. 3	4 25
No. 4	3 87½
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorators' Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs.	4 75	
No. 1, 560 lb. casks, per cwt	4 00	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.

In 1, 1/2 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peasey's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
"British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle	1 00
Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 10
Bladders in kegs, boxes or loose	1 85
25-lb. tins	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
No. 1 brown japan	2 85	3 20
Gold size, japan	1 50	1 60
Elastic oak	0 85	0 90
Furniture, extra	1 10	1 25
No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
" orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
" black japan	1 10	1 20
No. 1	0 85	0 90
Elastiline varnish, 1 gal. can, each	2 00	2 75
Granitine floor finish, per gal.	1 20	
Maple Leaf coach enamels; size 1, size 2, 70c.; size 3, 40c. each	\$1.20	
Sherwin-Williams' kopal varnish, case, from to 1 gal., \$2.50.	assorted	

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Strip	0 18	0 20
Coopers	0 19	0 20
Huttner		
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 40 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 5 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 10 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

Best thick brown or grey felt wads, in 1-lb. bags	per lb.
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	\$0 70
Best thick white card wads, in boxes of 500 each, 10 gauge	0 99
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 35
Thin card wads, in boxes of 1,000 each, 10 gauge	0 20
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 70
9 and 10 gauges	0 60
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

AXES.

Chopping Axes	
Single bit, per doz.	7 00 10 00
Double bit, "	10 00 18 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters Axes	5 50 6 00
Boys' Axes	6 25 7 00
Splitting Axes	7 00 12 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys' handled	5 75
" hunters	5 25

Underhill American Bench Axes, 40 p.c.

AXLE GREASE.

Ordinary, per gross	6 00 7 00
Best quality	10 00 12 00

BELLS.

Hand.

Brass, 60 per cent.	
Nickel, 55 per cent.	

Cow.

American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

Door.

Gongs, Sargent's	5 50 8 00
" Petersboro, discount 50 and 10 per cent. off new list.	

Farm.

American, each	1 25 3 00
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House.

American, per lb.	0 35 0 40
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BELLOWS.

Hand, per doz.	3 35 4 75
Moulders, per doz.	7 50 10 00

Blacksmiths', discount 40 per cent.

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	
Agricultural, not wider than 4 in., 75 per cent.	

BITS.

Auger.

Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.

Gilmour's, 47½ per cent.	
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Expansive.

Clark's, 40 per cent.	
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Gimlet.

Clark's, per doz	0 65 0 90
Diamond, Shell, per doz	1 00 1 50
Nail and Spike, per gross	2 25 5 20

BLIND AND RED STAPLES.

All sizes, per lb.	0 07½ 0 12
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BOLTS AND NUTS.

Carriage Bolts, common (\$1 list)	
" 3-16 and 1/2	60 and 10
" 5-16 and 1/2	55 and 5
" 7-16 and 1/2	55 and 5
" full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60

Machine Bolts, all sizes, 1/2 and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., 5½ to 6c.	

BOOT CALKS.

Small and medium, ball	per M. 4 25
Small heel	4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.

BUTCHERS' CLEAVERS.

German	per doz. 6 00 9 00
American	" 12 00 18 00

BUTCHER KNIVES.

Bailey's	per doz. 0 60 6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 600 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 25
Roof " small packages	per barrel 5 00
Refined Tar	per barrel 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 10

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.90 or 2-inch.	
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BUTTS.

Wrought Brass, net revised list.	
Cast Iron.	
Loose Pin, discount 50 per cent.	

Wrought Steel.

Fast Joint, discount 65, 10 and 2½ per cent.	
Loose Pin, discount 65, 10 and 2½ per cent.	
Berlin Bronzed, discount 70, 70 and 5 per cent.	
Gen. B. Bronzed	per pair 0 40 0 65

CARPET STRETCHERS.

American	per doz. 1 00 1 50
Bullard's	" 6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross 7 50 8 50
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CHALK.

Carpenters' Colored, per gross	0 45 0 75
White lump	per cwt. 0 60 0 65
Red	0 05 0 06
Crayon	per gross 0 14 0 18

CHISELS.

Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.

P. S. & W. Extra, discount 60 and 10 per cent	
FOODS—STOCK.	
Colonial Stock Foods, 50c. packages,	per doz \$1 00
" " " 25c. pkgs., "	2 00
" " " 10c. " pkgs. per doz	75
" " " 25-lb. pail, each	1 30
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz	1 25
Worm	1 25
International 1 Stock Foods, \$1 packages,	per doz. 8 00
International Stock Foods, per pail	2 75
" " " \$1 pkgs. per doz	8 00
" " " 50c. pkgs. per doz	8 00
" " " 25c. pkgs. per doz	8 00
" " " 10c. pkgs. per doz	8 00
" " " 5c. pkgs. per doz	8 00
" " " 2c. pkgs. per doz	8 00
" " " 1c. pkgs. per doz	8 00
" " " 1/2c. pkgs. per doz	8 00
" " " 1/4c. pkgs. per doz	8 00
" " " 1/8c. pkgs. per doz	8 00
" " " 1/16c. pkgs. per doz	8 00
" " " 1/32c. pkgs. per doz	8 00
" " " 1/64c. pkgs. per doz	8 00
" " " 1/128c. pkgs. per doz	8 00
" " " 1/256c. pkgs. per doz	8 00
" " " 1/512c. pkgs. per doz	8 00
" " " 1/1024c. pkgs. per doz	8 00
" " " 1/2048c. pkgs. per doz	8 00
" " " 1/4096c. pkgs. per doz	8 00
" " " 1/8192c. pkgs. per doz	8 00
" " " 1/16384c. pkgs. per doz	8 00
" " " 1/32768c. pkgs. per doz	8 00
" " " 1/65536c. pkgs. per doz	8 00
" " " 1/131072c. pkgs. per doz	8 00
" " " 1/262144c. pkgs. per doz	8 00
" " " 1/524288c. pkgs. per doz	8 00
" " " 1/1048576c. pkgs. per doz	8 00
" " " 1/2097152c. pkgs. per doz	8 00
" " " 1/4194304c. pkgs. per doz	8 00
" " " 1/8388608c. pkgs. per doz	8 00
" " " 1/16777216c. pkgs. per doz	8 00
" " " 1/33554432c. pkgs. per doz	8 00
" " " 1/67108864c. pkgs. per doz	8 00
" " " 1/134217728c. pkgs. per doz	8 00
" " " 1/268435456c. pkgs. per doz	8 00
" " " 1/536870912c. pkgs. per doz	8 00
" " " 1/1073741824c. pkgs. per doz	8 00
" " " 1/2147483648c. pkgs. per doz	8 00
" " " 1/4294967296c. pkgs. per doz	8 00
" " " 1/8589934592c. pkgs. per doz	8 00
" " " 1/17179869184c. pkgs. per doz	8 00
" " " 1/34359738368c. pkgs. per doz	8 00
" " " 1/68719476736c. pkgs. per doz	8 00
" " " 1/137438953472c. pkgs. per doz	8 00
" " " 1/274877906944c. pkgs. per doz	8 00
" " " 1/549755813888c. pkgs. per doz	8 00
" " " 1/1099511627776c. pkgs. per doz	8 00
" " " 1/2199023255552c. pkgs. per doz	8 00
" " " 1/4398046511104c. pkgs. per doz	8 00
" " " 1/8796093022208c. pkgs. per doz	8 00
" " " 1/17592186044416c. pkgs. per doz	8 00
" " " 1/35184372088832c. pkgs. per doz	8 00
" " " 1/70368744177664c. pkgs. per doz	8 00
" " " 1/140737488355328c. pkgs. per doz	8 00
" " " 1/281474976710656c. pkgs. per doz	8 00
" " " 1/562949953421312c. pkgs. per doz	8 00
" " " 1/1125899906842624c. pkgs. per doz	8 00
" " " 1/2251799813685248c. pkgs. per doz	8 00
" " " 1/4503599627370496c. pkgs. per doz	8 00
" " " 1/9007199254740992c. pkgs. per doz	8 00
" " " 1/18014398509481984c. pkgs. per doz	8 00
" " " 1/36028797018963968c. pkgs. per doz	8 00
" " " 1/72057594037927936c. pkgs. per doz	8 00
" " " 1/144115188075855872c. pkgs. per doz	8 00
" " " 1/288230376151711744c. pkgs. per doz	8 00
" " " 1/576460752303423488c. pkgs. per doz	8 00
" " " 1/1152921504606846976c. pkgs. per doz	8 00
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EASY TO PUT ON HARD TO WEAR OUT

Aptly describes two of the many advantages possessed by Paterson's Wire Edged Ready Roofing, the only popular substitute for Shingles.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.		GAUGES.		Clothes line, No. 61..		0 00	0 70	Cabinet.	
American, discount 62½ to 65 per cent.		Marking, Mortise, Etc.		Harness.....		0 60	12 00	Eagle, discount 30 per cent.	
CONDUCTOR PIPE.		Stanley's, discount 50 to 55 per cent.		Hat and coat..... per gro.		1 10	10 00	Padlocks.	
Plain or Corrugated.		Wire Gauges.		Chandelier..... per doz.		0 50	1 00	English and Am..... per doz.	
2-inch..... per 100 feet	3 00	Winn's, Nos. 25 to 33..... each		Wrought Iron.				Eagle, discount 20 to 25 per cent.	
3 ".....	4 00	Gillett's Powdered Lye.		Wrought hooks and staples Canadian dis-				MACHINE SCREWS.	
4 ".....	5 25	1-case, \$3.60; 3-case, \$3.50; 5-case and over,		Wire.				Iron and Brass.	
5 ".....	6 75	\$3.40.		Hat and coat, discount 60 per cent.				Flat head, discount 25 per cent.	
6 ".....	9 00	HALTERS.		Belt..... per 1,000		0 60		Round head, discount 20 per cent.	
CRADLES, GRAIN.		Rope, ¼-inch..... per gross		Screw, bright, discount 60 per cent.				MALLET.	
Canadian, discount 20 to 25 per cent.		Rope, ½ ".....		HORSE NAILS.				Tinsmiths'..... per doz.	
CROSSCUT SAW HANDLES.		Rope, ¾ ".....		"C" brand, 40, 10 and 7½ per cent. off list				Carpenters', hickory, " "	
S. & D., No. 3..... per pair	0 17½	Leather, 1-inch..... per doz.		"M" brand, 55, per cent.				Lignum Vitae..... " "	
S. & D., " 5.....	0 22½	Web.....		Countersunk, 57½ per cent.				Caulking, each.....	
S. & D., " 6.....	0 15	HAMMERS.		"Monarch," 50 and 7½ per cent.				MATTOKS.	
Boynton pattern.....	0 20	Nail.		"Peerless" 50 per cent. dis.				Canadian..... per doz.	
DOOR SPRINGS.		Maydole's, discount 5 to 10 per cent. Canadian		HORSESHOES.				MEAT CUTTERS.	
Torrey's Rod..... per doz.	1 75	discount 25 to 27½ per cent.		F.O.B. Montreal				American, discount ¾ per cent.	
Coil, 9 to 11 in.....	0 95	Tack.		No. 2 No. 1				German, 15 per cent.	
English.....	2 00	Magnetic..... per doz.		and larger smaller.				Gem..... each	
DRAW KNIVES.		Canadian..... per lb.		Iron Shoes.				MILK CAN TRIMMING.	
Coach and Wagon, discount 50 per cent.		Sledge.....		Light, medium and heavy....		3 65	3 90	Discount 25 per cent.	
Carpenters' discount 60 and 10 per cent.		Ball Peen.		Snow shoes.....		3 90	4 15	NAILS.	
DRILLS.		English and Canadian, per lb.		Steel Shoes.				Cut.	
Hand and Breast.		0 22		XL, sizes 1 to 5.....				Wire.	
Miller's Falls, per doz., net list.		HANDLES.		Light, No. 2 and larger.....		5 35		2d and 3d.....	
DRILL BITS.		Axe, 2nd growth, per doz. net		No. 1 and smaller.....		4 05		3d.....	
Morse, discount 37½ to 40 per cent.		S'ore door..... per doz.		Featherweight, all sizes 0 to 4.....		5 35		4 and 5d.....	
Standard, discount 50 and 5 to 55 per cent.		Fork.		Toeweight, all sizes 1 to 4.....		6 60		6 and 7d.....	
FAUCETS.		C. & B., discount 40 per cent., revised list.		JAPANNED WARE.				8 and 8d.....	
Common, cork-lined, discount 35 per cent.		Hoe.		Discount 50 per cent.				10 and 12d.....	
EAVETROUGHS.		C. & B., discount 40 per cent., revised list.		ICE PICKS.				16 and 20d.....	
10-inch..... per 100 ft. 10 00		Saw.		Star..... per doz.		00	3 25	30, 40, 50 and 60d (base).....	
ELBOWS (stovepipe.)		Plane.		KETTLES.				Cut nails in carlots 5c. less.	
5 and 6-inch, common..... per doz.	1 20	American..... per gross		Brass spun 7½ per cent. discount off new list.				Wire nails in carlots are \$2.40.	
7-inch.....	1 35	3 15		Copper..... per lb.		0 30	0 50	Steel cut nails 10c. extra.	
Polished, 15c. per dozen extra.		Hammer and Hatchet.		American, 60 and 10 to 55 and 5 per cent.				Miscellaneous wire nails, discount 75 per cent.	
ESCUTCHEONS.		Canadian, discount 40 per cent.		KEYS.				Coopers' nails, discount 30 per cent.	
Discount 50 and 10 per cent., new list		HANGERS.		Lock, Canadian dis. 40 to 40 and 10 per cent.				NAIL PULVERS.	
ESCUTCHEON PINS.		doz. pairs.		Cabinet, trunk and padlock.				German and American.....	
Iron, discount 40 per cent.		Steel barn door.....		American..... per gross		0 60		NAIL SETS.	
FACTORY MILK CANS.		Stearns, 4-inch.....		KNOBS.				Square, round and octagon,	
Discount off revised list, 40 per cent.		Zenith.....		Door, japanned and N.P., per		1 50	2 50	per gross.....	
FILES AND RASPS.		Lare's covered—		Bronze, Berlin..... per doz.		2 75	3 25	Diamond.....	
Great Western..... 70 and 10 per cent.		No. 11, 5-foot run.....		Bronze, Genuine.....		6 00	9 00	POULTRY NETTING.	
ArCADE..... 70 " 10 "		No. 11½, 10-foot run.....		Shutter, porcelain, F. & L.				2-in. Mesh, 19 w.g., dis. 60 per cent.	
Kearney & Foot..... 70 " 10 "		No. 12, 10-foot run.....		screw..... per gross		1 30	00	2-in. Mesh, 16 w.g. and heavier, 50 p.c.	
Diston's..... 70 " 10 "		No. 14, 15-foot run.....		White door knobs..... per doz.		2 00		OAKUM.	
American..... 70 " 10 "		Steel, covered.....		HAY KNIVES.				U. S. Navy..... per 100 lb.	
J. Barton Smith..... 70 " 10 "		No. 11, 5-foot run.....		Net prices.				Plumbers.....	
McClellan..... 70 " 10 "		No. 11½, 10-foot run.....		LAMP WICKS.				OILERS.	
Eagle..... 70 " 10 "		No. 12, 10-foot run.....		Discount, 60 per cent.				McClary's Model galvanized	
Nicholson, 60 and 10 to 60, 10 and 5		No. 14, 15-foot run.....		LANTERNS.				oil can, with pump, 5 gallon,	
Royal..... 80		" track, 1 x 3-16 in(100 ft)		Cold Blast..... per doz.		7 00		per dozen.....	
Globe..... 70 to 75		" 1½ x 3-16 in(100 ft)		No. 3, "Wright's".....		8 50		Davidson oilers, discount 40 per cent.	
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.		HARVEST TOOLS.		Ordinary, with O. burner.....		4 00		Zinc and tin, discount 50, 50 and 10 per cent.	
Jowitt's, English list, 25 to 27½ per cent.		Discount 60 per cent.		Dashboard, cold blast.....		9 00		Copper..... per doz.	
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50		HATCHETS.		No. 0.....		5 75		Brass.....	
GLASS.		Canadian, discount 40 to 42½ per cent.		Japanning, 50c. per doz. extra.				Malleable, discount 25 per cent	
Window. Box Price.		Shingle, Red Ridge 1, per doz.....		LEMON SQUEEZERS.				GALVANIZED PAIRS.	
Size United Per Per Per Per		Barrel, Underhill.....		Porcelain lined..... per doz.		2 20	5 60	Dufferin pattern pails, discount 45 per cent	
50 ft. 100 ft. 50 ft. 100 ft.		Henderson & Potts' "Anchor Brand"		Galvanized.....		1 87	3 85	Flaring pattern, discount 45 per cent.	
Under 26.....	3 80	Hinges.		King, wood.....		2 75	2 90	Galvanized washtubs, discount 45 per cent	
26 to 40.....	4 00	Blind, Parker's, discount 60 per cent.		King, glass.....		4 00	4 50	PIECED WARE.	
41 to 50.....	4 50	Heavy T and strap, 4-in., per lb.....		All glass.....		0 50	0 90	Discount 40 per cent off list, June, 1899.	
51 to 60.....	4 75	" 5-in., ".....		LINES.				10-qt. flaring sap buckets, discount 40 per cent	
61 to 70.....	5 00	" 6-in., ".....		Fish..... per gross		1 05	2 50	6, 10 and 14-qt. flaring pails dis. 40 per cent.	
71 to 80.....	5 30	" 8-in., ".....		Chalk.....		1 90	7 40	Creamer cans, discount 40 per cent.	
81 to 85.....		" 10-in., ".....		LAWN MOWERS.				Per dozen.....	
86 to 90.....		Light T and strap, discount 65 and 5 per cent.		Woodyatt, 10½ in. wheel, 14-in. cut ..		8 50		PICKS.	
91 to 95.....		Screw hook and hinge—		Star.....		7 00		6 00	
96 to 100.....		6 to 10 in..... per 100 lb.		Daisy, 8-in. " (net)		2 87½		PICTURE NAILS.	
Discount 15 per cent.		12 in. up.....		Philadelphia, 7½ in. " "		7 00		Porcelain head..... per gross	
		Spring, No. 20, per gro. pairs		Ontario, 7½ in. " "		15 80		1 35	
		Garden, Mortar, etc., discount 60 per cent.		King Edw'd, 12-in. " "		9 50		Brass head.....	
		Planter..... per doz.		Discount, 50 per cent., with freight conces-				0 40	
		Tinned cast, 35 per cent.		sions in quantity shipments.				1 00	
		HOLLOW WARE.		Maxwell & Sons:				PICTURE WIRE.	
		Hooks.		10½ in. high wheel.....		7 50	10 00	Tin and gilt, discount 75 per cent.	
		Cast Iron.		9-in. ".....		5 50	6 25	PINE TAR.	
		Bird cage..... per doz.		8-in. ".....		4 90	5 50	1 pint in tins..... per gross	
				Discount 50 per cent.				9 60	
				LOCKS.				PLANES.	
				Canadian, 50 to 50 and 10 per cent.				Wood bench, Canadian discount 40 per cent.,	
				Russell & Erwin..... per doz.				American discount 50 per cent.	
								Wood, fancy Canadian or American, 37½ to	
								40 per cent	

The New U.M.C. 33 Primers

give an added ballistic value to the powder and shot charges in all U. M. C. smokeless powder shells.

THE NO. 3 U. M. C. PRIMERS

were the first and best primers for smokeless powder ever made here or abroad—until the advent of the new U.M.C. 33 primers, which were substituted for them some time ago.

The U.M.C. Southern Squad used shells primed with the new 33 primers.

The Union Metallic Cartridge Co.

Agency, 313 Broadway, New York, N.Y.

Factory, BRIDGEPORT, CONN.

PLANE IRONS.			SAP SPOUTS.			STAPLES.			ENAMELLED WARE.		
English	2 00	5 00	Bronzed iron with hooks	per 1,000	7 50	Galvanized	3 00		White, Princess, Turquoise, Blue and White		
37 1/2 to 40 per cent.			"Eureka" tinned steel, hooks	"	8 00	Plain	2 80		discount 50 per cent.		
PLIERS AND NIPPERS.			SAWS.			STOCKS AND DIES.			Diamond, Famous, Premier, discount 50 and		
Button's genuine, per doz. pairs, discount			Hand, Diston's, discount 12 1/2 per cent			American discount 25 per cent.			10 per cent.		
37 1/2 to 40 per cent.			S. & D., discount 40 per cent.						Granite or Pearl, Imperial, Crescent, discount		
Button's imitation, per doz.	5 00	9 00	Crosscut, Diston's, per foot	0 35	0 55				50, 10 and 10 per cent.		
German	0 60	60	S. & D., discount 35 per cent. on Nos. 2 and 3.						Premier steel ware, 40 per cent.		
PRESSED SPIKES.			Hack, complete, each	0 75	2 75				"Star" decorated steel and decorated white,		
Discount 20 per cent.			" frame only, each	0 50	1 25				25 per cent.		
PULLEYS.			SASH WEIGHTS.			STONE.			WIRE.		
Hothouse	per doz.	0 55 1 00	Sectional, per 100 lb.	2 00	2 25	Washita	per lb.	0 28 0 60	Smooth Steel Wire.		
Axle	"	0 22 0 33	Solid	1 50	1 75	Hindustan	"	0 06 0 07	No. 0-9 gauge.		
Screw	"	0 27 1 00	Per lb.	0 28	0 30	Labrador	"	0 09 0 09	10 "	6c. extra.	
Awning	"	0 35 2 50	SAW SETS.			" Axle	"	0 13 0 15	11 "	12c. "	
PUMPS.			Lincoln and Whiting	per doz.	4 75	Turkey	"	0 30 0 30	12 "	20c. "	
Canadian cistern	1 80	3 60	Hand Sets, Perfect	4 00		Arkansas	"	1 50 5 00	13 "	30c. "	
Canadian pitcher spout	1 40	2 10	X-Cut Sets, "	7 50		Water-of-Ayr	"	0 10 0 10	14 "	40c. "	
PUNCHES.			SCALES.			Scythe	per gross	3 50 5 00	15 "	55c. "	
Saddler's	per doz.	1 00 1 85	Gurney Standard, 40 per cent.			Grind, 2-in. 40 to 200 lb. per ton		25 00 28 00	16 "	70c. "	
Conductor's	"	3 00 15 00	Gurney Champion, 50 per cent.			" under 2 in. thick, "		29 00	Add 60c. for coppering and \$2 for tinning.		
Finners, solid, per set	0 72		Burrow, Stewart & Milne—			5 and 6 inch, per 100 lengths	7 00		Extra net per 100 lb.—Oiled wire 10c.,		
" hollow, per inch	1 00		Imperial Standard, discount 40 per cent.			7 inch	7 50		spring wire \$1.25, special hay baling wire 30c.,		
RAKES.			Weight Beams, discount 35 per cent.			ENAMELINED STOVE POLISH.			best steel wire 75c., bright soft drawn 15c.,		
Wood	per doz. net	1 20 up	Champion Scales, discount 50 per cent.			No. 4, 3 doz. in case, net cash	4 80		charcoal (extra quality) \$1.25, packed in cases		
RAZORS.			Fairbanks standard, discount 35 per cent.			No. 6, 3 doz. in case	8 40		or cases 15c., bagging and papering 10c., 50		
Elliot's	per doz.	4 00 18 00	" Dominion, discount 55 per cent.			TACKS, BRADS, ETC.			and 100-lb. bundles 10c., in 25-lb. bundles		
Geo. Butler's & Co. s.	"	4 00 18 00	Richelieu, discount 55 per cent.			Carpet tacks, blued	80 and 15		15c., in 5 and 10-lb. bundles 25c., in 1-lb.		
Boker's	"	7 50 11 00	Warren's new Standard, discount 40 per cent.			" tinned	80 and 20		hanks, 50c., in 1-lb. hanks 75c., in 1-lb.		
" King Cutter	"	12 50 15 00	" Champion, discount 50 per cent.			" (in kegs)	40		hanks \$1.		
Wade & Butcher's	"	3 60 10 00	" Weightbeams, discount 35 per cent.			Cut tacks, blued, in dozens only	80		Fine Steel Wire, discount 25 per cent.		
Thiele & Quack's	"	7 00 12 00	Screw Drivers.			" weights	60		List of extras: In 100-lb. lots: No. 17,		
Carbo Magnetic	"	15 00	Sargent's	per doz.	0 65 1 00	Swedes cut tacks, blued and tinned—	80 and 10		\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—		
Griffon Barber's Favorite	"	10 75	Screen Doors.			In dozens	75		No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No.		
Griffon No. 65	"	13 00	Common doors, 2 or 3 panel, walnut			Swedes, upholsterers', bulk	85, 12 1/2 and 12 3/4		24, \$8—No. 25, \$9—No. 26, \$9.50—No. 27,		
Griffon Safety Razors	"	13 50	stained, 4-in. style	per doz.	6 50	" brush, blued and tinned	70		\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—		
Griffon Stropping Machines	"	13 50	Common doors, 2 or 3 panel, yellow and			Swedes, gimp, blued, tinned and	75 and 12 1/2		No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,		
Lewis Bros "Klean Kutter"	8 50	10 50	green stained, 4-in. style	per doz.	6 75	Japaned	35		\$17. Extras not tinned wire, Nos. 17-25,		
REGISTERS.			Common doors, 2 or 3 panel, in natural			Leather carpet tacks	55		\$2—Nos. 26-31, \$4—No. 32-34, 36. Coppered,		
Discount 40 per cent.			colors, oil finish	per doz.	8 75	Copper tacks	50		5c.—oiling, 10c.—in 25-lb. bundles, 15c.—in 5		
RIVETS AND BURNS.			3-in. style 20c. per dozen less.			Copper nails	52 1/2		and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.		
Iron Rivets, black and tinned, discount 60 and			SCREWS.			Trunk nails, tinned	65 and 5		—in 1-lb. hanks, 38c.—in 1-lb. hanks, 50c.—		
10 per cent.			Wood, F. H., bright and steel, discount 87 1/2			Clout nails, blued	65 and 5		packed in cases or cases, 15c.—bagging or		
Iron Burns, discount 55 per cent.			per cent.			Chair nails	35		papery, 10c.		
Extras on Iron Rivets in 1-lb. cartons, 1c.			Wood, R. H., bright, dis. 82 1/2 per cent.			Patent brads	40		Brass wire, discount 60 per cent. off the list.		
per lb.			" F. H., brass, dis. 80 per cent.			Fine finishing	40		Copper wire, discount 60 per cent. net cash		
Extras on Iron Rivets in 1/2-lb. cartons, 1c.			" R. H., dis. 75 per cent.			Lining tacks, in papers	10		30 days, f.o.b. factory.		
per lb.			" F. H., bronze, dis. 75 per cent.			" in bulk	15		Galvanized wire, per 100 lb.—Nos. 4 and 5		
Copper Rivets, with usual proportion burns, 15			" R. H., dis. 70 per cent.			" solid heads, in bulk	75		\$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.15		
per cent. discount. Cartons, 1c. per lb.			Drive Screws, dis. 87 1/2 per cent.			Saddle nails, in papers	10		—No. 9, \$2.55—No. 10, \$3.20 to \$3.20		
extra, net.			Bench, wood	per doz.	3 25 4 00	" in bulk	15		—No. 11, \$3.25 to \$3.25—No. 12, \$2.65		
Copper Burns only, discount 30 and 10 per cent.			Set, case hardened, dis. 60 per cent.			Tufting buttons, 22 line, in doz-	60		—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.		
Extras on Tinned or Coppered Rivets, 1/2-lb.			Square Cap, dis. 50 and 5 per cent.			ens only	60		15, \$4.30—No. 16, \$4.30. Base sizes, Nos.		
cartons, 1c. per lb.			Hexagon Cap, dis. 45 per cent.			Zinc glaziers' points	5		6 to 9, \$2.27 1/2 f.o.b. Cleveland. In carlots		
RIVET SETS.			SCYTHES.			Double pointed tacks, papers	9 and 10		12c. less.		
Canadian, discount 35 to 37 1/2 per cent.			Per doz. net	6 00 9 00		Clutch and duck rivets	45		Clothes Line Wire, regular 7 strand, No. 17,		
ROPE, ETC.			SCYTHE SNATHS.			TAPE LINES.			\$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow		
Sisal		0 11 1/2	Canadian, discount 40 per cent.			English, ass skin	per doz.	2 75 5 00	6 strand, No. 17, \$4.30; No. 18, \$2.70; No.		
Pure Manila		0 14 1/2	SHEARS.			Chesterman's	each	0 90 2 85	19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,		
"British" Manila		0 12	Bailey Cutlery Co., full nickeled, disconu			" steel	each	0 80 8 00	Toronto, Montreal.		
Cotton, 3-16 inch and larger	0 20 1/2	0 22	and 2 1/2 per cent.			TINNERS' SNIPS.			WIRE FENCING.		
" 5-32 inch	0 25	0 27	Bailey Cutlery, Japan Handles, discount 67 1/2			Per doz.	3 00 15 00		Galvanized barb	2 75	
" 1 inch	0 25	0 28	per cent.			Tin case and dairy, discount 75 to 75 and 10			Galvanized plain twist	2 80	
Russia Deep Sea		0 16	Seymour's, discount 50 and 10 per cent.			per cent.			Galvanized barb, f.o.b. Cleveland, \$2 55 1/2 in		
Jute		0 09	SHOVELS AND SPADES.			TRAPS (steel)			less than carlots, and \$2 45 in carlots.		
Lath Yarn, single		0 10	Canadian, discount 45 per cent.			Game, New Haven, discount 25 per cent.			COILED SPRING WIRE.		
" double		0 10 1/2	SINKS.			Game, H. & N., P. S. & W., 65 per cent.			High Carbon, No. 9	\$2 70	
Sisal bed cord, 48 feet	per doz.	0 65	Cast iron, 16 x 24	0 85		Game, steel, 72 1/2, 75 per cent.			" No. 11	3 35	
" 60 feet	"	0 80	" 18 x 30	1 00		THERMOMETERS.			" No. 12	2 95	
" 72 feet	"	0 95	" 18 x 36	1 40		Tin case and dairy, discount 75 to 75 and 10			WIRE CLOTH.		
RULES.			SNAPS.			per cent.			Painted Screen, per 100 sq. ft., net.	1 50	
Boxwood, discount 55 per cent.			Harness, German, discount 25 per cent.			TROWELS.			Terms, 2 per cent. off 30 days.		
Ivory, discount 37 1/2 to 40 per cent.			Lock, Andrews	4 50 11 50		Disston's, discount 10 per cent.			WASHING MACHINES.		
SAD IRONS.			SOLDERING IRONS.			German	per doz.	4 75 6 00	Round, re-acting, per doz.	56 00	
Mrs. Potts, No. 55, polished	per set	0 80	1, 1 1/2-lb. over	per lb.	0 37	S. & D., discount 35 per cent.			Squire	59 00	
" No. 50, nickle-plated	"	0 90	2-lb. or over	"	0 34	TWINES.			Eclipse, per doz.	48 00	
Common, plain	4 50		Iron, No. 493	per doz.	2 40 2 55	Bag, Russian	per lb.	0 27	Dowsell	36 00	
" plated	6 50		" No. 494	"	3 25 3 40	Wrapping, cotton, 3-ply	"	0 24	New Century, per doz.	72 00	
SAND AND EMERY PAPER.			Steel, discount 60 to 60 and 5 per cent.			Mattress	per lb.	0 33 0 45	Connor Improved	33 00	
B. & A. sand, discount, 40 and 5 per cent			Try and Bavel, discount 50 to 52 1/2 per cent.			Staging	"	0 27 0 35	Daisy	48 00	
Emery, discount 40 per cent.			STAMPED WARE.			VISES.			WRINGERS.		
Canmet (Rutten) 5 to 10 per cent. advance			Plain, discount 75 and 12 1/2 per cent. off re-			Wright's	0 13 1/2		Leader	per doz. 30 00 33 00	
on list			vised list.			Brook's	0 12 1/2		Royal Canadian	24 00	
			Retinned, discount 75 per cent. off revised list.			Pipe Vise, Hinge, No. 1	3 50		Royal American	24 00	
						" No. 2	5 50		Sampson	24 00	
						Saw Vise	4 50 9 00		Lightning	37 00	
						Columbia Hardware Co.			Terms, 4 months, or 3 per cent. 30 days.		
						Blacksmiths (discount) 60 per cent.			WROUGHT IRON WASHERS.		
						or small (discount) 45 per cent.			Canadian make, discount 40 per cent.		

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Gleaned from the Travelers

CAMPBELL & SONS, general merchants, Elora, Ont., have lately remodelled the interior of their stores. Plate glass fronts have been added and the exterior of the buildings been repainted, which gives them a very attractive appearance. This firm have two of the brightest and best equipped stores in western Ontario.

Graef Bros., general merchants, Cliford, Ont., have sold their general store business to J. Weber of that town, and Mr. Weber's many friends are wishing him every success in his new enterprise. C. McArthur, who has been manager for Graef Bros. for several years past, will continue in charge of the store.

R. Harstone, general merchant, of Warksworth, Ont., accompanied by his wife, was in Toronto the past week.

W. Thompson, of Thompson, Marshall & Co., general merchants, Dobbington, Ont., is spending his holidays in Toronto. Mr. Thompson reports trade particularly good with his firm.

E. Pritchard, general merchant, of Newbridge, Ont., is spending his holidays in Toronto.

Halliday & Stinson, general merchants, of Chesley, Ont., have been busy during the past six weeks purchasing wool, which trade is reported to have been of great assistance to their retail

trade. They have one of the finest general stores in the north.

C. J. Halliday, general merchant, of Chesley, Ont., reports retail trade as being all that can be desired.

S. H. Glassford, of Cannington, Ont., has started a general business there.

THE KNIGHT OF THE GRIP.

IN a booklet sent out by the Enterprise Mfg. Co., Akron, O., the following admirable suggestions regarding the selling of goods are given:

"If you are going to make a success you will have to work and work hard, for in these days of strong competition you will find if you are a little lazy, the other fellow has got the business. You want to go out for business, and do not forget that your tools, which consist of bull dog grit and iron clad nerve, must go with you.

"When a customer says to you that he does not wish to buy goods, or that he is going to buy some other make, or your prices are too high, you want to be just as aggressive as a man can be and go for that customer, just as a dog goes for a rabbit, and never give up the chase until you have got your man.

"The great trouble of nine-tenths of the traveling men on the road to-day is that they are not game and give up too easy, and if a customer says 'No,' they settle right down to what the customer says. Now that kind of a man is not worth a cent to us, and he had better be sawing wood, shoveling dirt or fol-

lowing the plow than out on the road to sell goods.

Now if you will follow our instructions, each and every traveler will be more valuable than he has been heretofore. Do not say, 'It can't be done.' If you feel that way, we would rather you would resign and quit, because when a man feels he can't accomplish anything, he will never make half the effort he would if he were determined to do it. Go to work as if your life depended upon what we have to say to you here, and you will be surprised at your success."

THE ADVANTAGES OF THE BATH.

TALKING about personal habits, it is more and more thoroughly demonstrated every day that "cleanliness comes next to godliness," and that the daily morning bath is a great revivifier and consequently trade getter. It seems singular to urge that a man who keeps his body clean stands a better chance of getting business than the one who is neglectful or careless about the care of his person. Such is a fact, however, because it is granted that the former enjoys better health than the latter. It is no longer considered that a man is trying to be a "dude" and "put on style" because he takes a bath often than once a week, but rather that he is a sensible, modern man, who desires to take the best care of his health and get the most enjoyment out of this world.—Stove Reporter.

CLASSIFIED LIST OF ADVERTISEMENTS.

Accountants and Auditors.

Barber, Henry & Co., Toronto.
 Fahey, Wm., Toronto.
 Hoskins, David, Toronto.
 Jenkins & Hardy, Toronto.
 Kidd, F. H., Toronto.
 McEon, Geo. O., Toronto.
 Williamson, T. G., Toronto.

Anvils

Taylor-Forbes Co., Guelph, Ont.

Art Glass

St. George, H. E., London, Ont.

Axes Hatchets, Scythes, etc.

American Axe and Tool Co., Montreal.
 Dundas Axe Works, Dundas, Ont.

Babbitt Metal.

Canada Metal Co., Toronto.
 Fairbanks Co., Montreal and Toronto.
 Langwell's, Montreal.
 Syracuse Smelting Works, Montreal.

Barristers, Solicitors, etc.

Atwater, Duclos & Chauvin, Montreal.
 Beatty, Blackstock, Fasken & Riddell, Toronto.
 Burritt, James H., K.C., Pembroke, Ont.
 Cameron, D. O., Toronto.
 Hamilton, J. C., Toronto.
 Tupper, Phippen & Tupper, Winnipeg.
 Vidal, I. L. O., Montmagny and Quebec.

Belting, Hose, etc.

Canadian Rubber Co., Montreal and Toronto.
 Dominion Belting Co., Hamilton.
 Gutta Percha and Rubber Mfg. Co., Toronto.
 Pullman Mfg. Co., Rochester, N.Y.
 Sadler & Haworth, Montreal & Toronto.

Bicycles and Sundries.

Millen, John, & Son, Montreal.

Bird Cages.

Wright, E. T., & Co., Hamilton.

Brass Goods.

Jones & Barclay, Birmingham.
 Lewis, Rice, & Son, Toronto.
 Morrison, Jas., Brass Mfg. Co., Toronto.
 Nicklin, J. & Co., Birmingham, Eng.
 Penberthy Injector Co., Windsor, Ont.
 Taylor-Forbes Co., Guelph, Ont.

Brushes and Brooms.

United Factories, Toronto.

Carpenters' and Builders' Tools and Supplies.

Atkins, E. C., & Co., Indianapolis, Ind.
 Baynes, Chas., Blackburn, Eng.
 Bliss, R., Mfg. Co., Pawtucket, R.I.
 Covert Mfg. Co., West Troy, N.Y.
 Fairbanks Co., Montreal and Toronto.
 Howland, H. S. Sons & Co., Toronto.
 Hyde, F., & Co., Montreal.
 Ives, H. R. Co., Montreal.
 Lamplough, F. W., & Co., Montreal.
 Lewis Bros. & Co., Montreal.
 Lewis, Rice, & Son, Toronto.
 Lufkin Rule Co., Saginaw, Mich.
 McNally, W., & Co., Montreal.
 Merrick, Anderson & Co., Winnipeg.
 Metal Shingle & Siding Co., Preston, Ont.
 Metallic Roofing Co., Toronto.
 Newman & Sons, Birmingham.
 North Bros. Mfg. Co., Philadelphia, Pa.
 Ontario Tack Co., Hamilton, Ont.
 Ormsby, A. B., & Co., Toronto.
 Pedlar People, Oshawa, Ont.
 Phillips, Chas. D., Newport, Eng.
 Smith & Hemenway Co., New York.
 Stanley Rule & Level Co., New Britain, Conn.
 Taylor-Forbes Co., Guelph, Ont.
 Wilcox Mfg. Co., London, Ont.

Carriage and Waggon Accessories.

Covert Mfg. Co., West Troy, N.Y.

Churns.

Maxwell, David, & Sons, St. Marys.

Clippers—All Kinds.

American Shearer Mfg. Co., Nashua, N.H.
 Barton-Gillette Horse Clipping Co., London, Eng.
 Boker, Henry, Montreal.
 Burman & Sons, Birmingham, Eng.

Cordage.

Brantford Cordage Co., Brantford.
 Canadian Cordage and Mfg. Co., Peterborough, Ont.
 Consumers' Cordage Co., Montreal.
 Hamilton Cotton Co., Hamilton.

Corundum.

Canada Corundum Co., Toronto.

Cutlery—Razors, Scissors, etc.

Birkett, Thos., & Son Co., Ottawa.
 Boker, Henry, Montreal.
 Butler, Geo., & Co., Sheffield, Eng.
 Clauss Shear Co., Toronto.
 Heinisch's, R. Sons Co., Newark, N.J.
 Lamplough, F. W., & Co., Montreal.
 Silberstein, A. L., New York.
 Smith & Hemenway Co., New York.
 Walter, E. F., & Co., Montreal.
 Wiebusch & Hilger, New York.

Educational.

Belleville Business College, Belleville.
 Canadian Corr. College, Toronto.
 St. Margaret's College, Toronto.
 Willis Business College, Ottawa, Ont.
 Western Business College, Toronto.

Electric Fixtures.

Morrison James, Mfg. Co., Toronto.
 Munderloh & Co., Montreal.

Engravers.

Legg Bros., Toronto.
 Smith, Geo. J., New York.

Files and Rasps.

Barnett Co., G. & H., Philadelphia, Pa.
 Grose, Walter, Montreal.

Financial Institutions.

Bradstreet Co.
 British America Assurance Co., Toronto.
 Canadian Bank of Commerce, Toronto.
 Confederation Life Ass., Toronto.
 Liverpool & London & Globe Ins. Co., Toronto.
 London Guarantee and Accident Ins. Co., Toronto.
 Metropolitan Bank, Toronto.
 Western Assurance Co., Toronto.

Firearms and Ammunition.

Abbey Improved Chilled Shot Co., New-castle-on-Tyne, Eng.
 Hamilton Rifle Co., Plymouth, Mich.
 Harrington & Richardson Arms Co., Worcester, Mass.
 Iver Johnson's Arms and Cycle Works, Fitchburg, Mass.
 Remington Arms Co., Ilion, N.Y.
 Union Metallic Cartridge Co., Bridgeport, Conn.
 Walter, E. F., & Co., Montreal.

Flat Irons.

Ives, H. R., Co., Montreal.

Food Choppers

Enterprise Mfg. Co., Philadelphia, Pa.
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 Russell & Erwin Mfg. Co., New Britain, Conn.
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 International Gas Appliance Co., Toronto

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Sharratt & Newth, London, Eng.
 Shaw, A., & Son, London, Eng.

Glue.

Grove Chemical Co., Lancashire, Eng.

Hardware Specialties.

Erie Specialty Co., Erie, Pa.

Horseshoe Pads.

Canadian Rubber Co., Montreal.

Horseshoes and Nails.

Canada Horse Nail Co., Montreal.
 Peck Rolling Mills, Montreal.

Ice Cutting Tools.

Erie Specialty Co., Erie, Pa.
 North Bros. Mfg. Co., Philadelphia, Pa.

Injectors—Automatic.

Penberthy Injector Co., Windsor, Ont.

Iron Pipe.

Page-Hersey Iron and Tube Co., Guelph.

Iron Pumps.

McDougall, R., Co., Galt, Ont.

Keys.

Millen, John & Son, Montreal.

Lanterns.

Ontario Lantern Co., Hamilton, Ont.
 Wright, E. T., & Co., Hamilton.

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Bowman, John, Hardware and Coal Co., London, Ont.
 Maxwell, David, & Sons, St. Marys, Ont.
 Taylor-Forbes Co., Guelph, Ont.

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Briggs Ledger System Co., Toronto.
 Weese, G. A. & Son, Toronto.

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 Warnock, Jas., & Co., Galt.

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 Kerr Engine Co., Walkerville, Ont.
 Morrow Machine Screw Co., Ingersoll, Ont.
 Ontario Wind Engine and Pump Co., Toronto.
 Penberthy Injector Co., Windsor.

Mantels.

Batty Stove and Hardware Co., Toronto.

Manufacturers' Agents.

Gibb, Alexander, Montreal.
 Philip, David, Winnipeg.

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Booth Copper Co., Toronto.
 Canada Iron Furnace Co., Midland, Ont.
 Canada Metal Co., Toronto.
 Deseronto Iron Co., Deseronto, Ont.
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 Hankin, F., Montreal.
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 Kemp Mfg. Co., Toronto.
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 Morton, B. K., & Co., Sheffield, Eng.
 Nova Scotia Steel and Coal Co., New Glasgow, N.S.
 Peck Rolling Mills, Montreal.
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 Samuel, Benjamin & Co., Toronto.
 Thompson, B. & S. H. & Co., Montreal.

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Cutts, C. M., & Co., Toronto Junction.

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Davidson, Thos., Mfg. Co., Montreal.
 Kemp Mfg. Co., Toronto.
 McClary Mfg. Co., London, Ont.

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 Canadian Oil Co., Toronto.
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 Merrick, Anderson & Co., Winnipeg.
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 McArthur, Alex., & Co., Montreal.
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 Metallic Roofing Co., Toronto.
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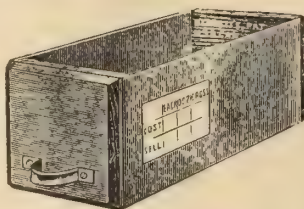
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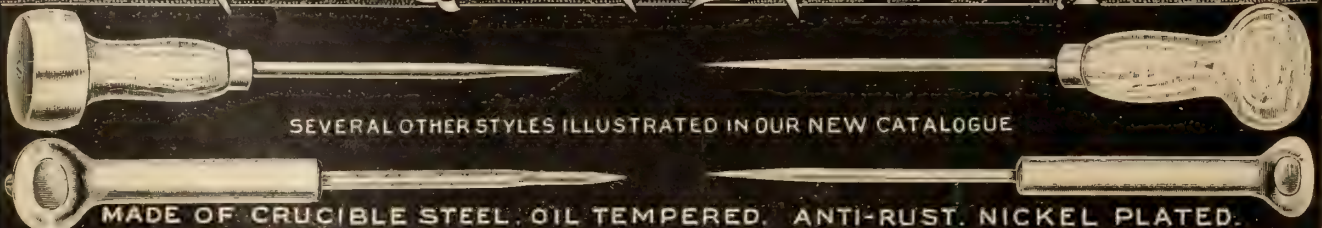
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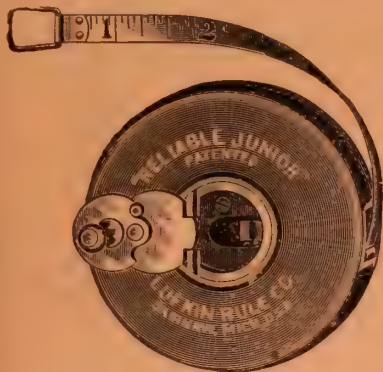
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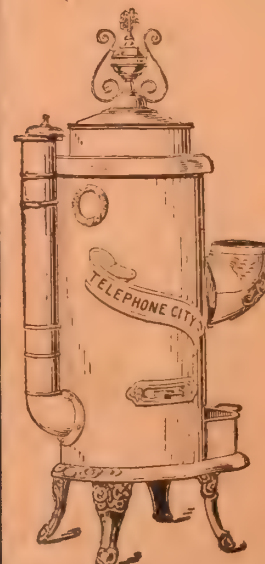
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A Weekly Newspaper devoted to the Hardware, Metal, Machinery,
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VOL. XVI.

MONTREAL AND TORONTO, JULY 16, 1904.

NO. 29

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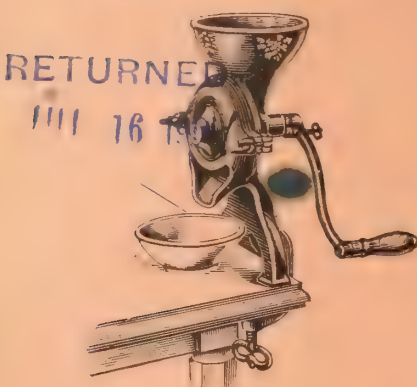
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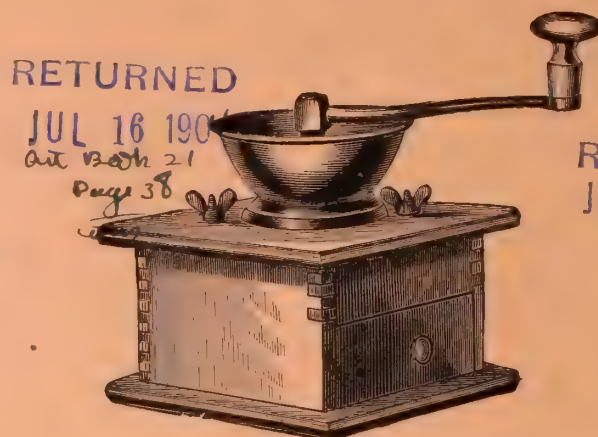
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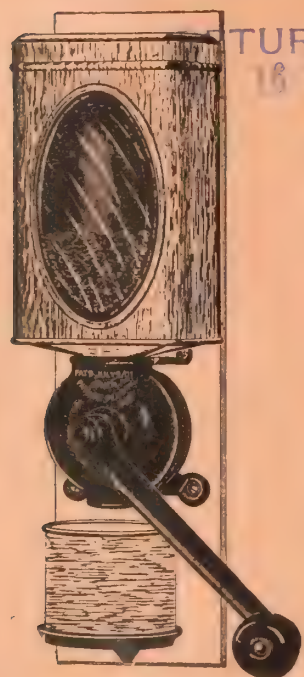
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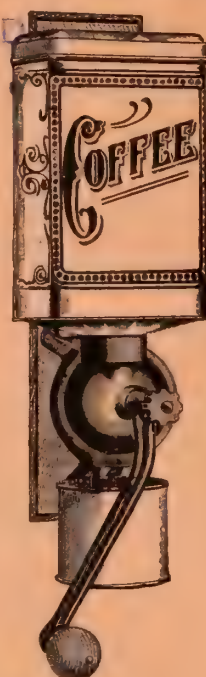
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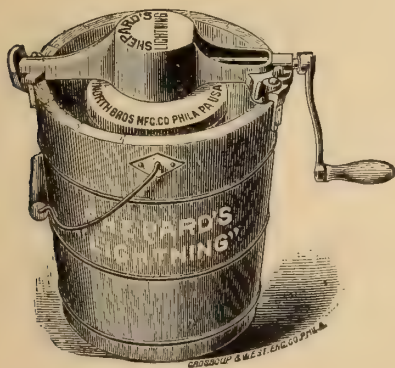
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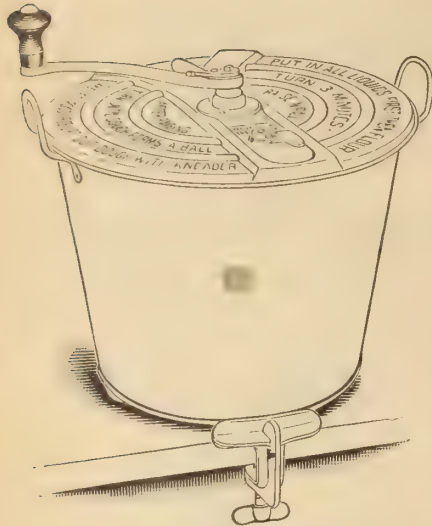
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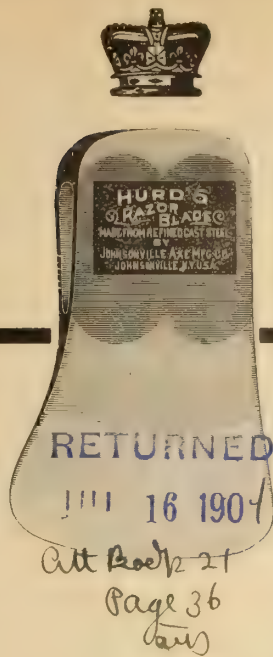
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certainly bring business—and it will if you only give it "a show."

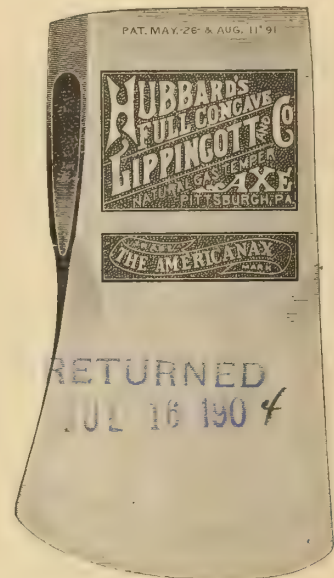
Hurd's is the Queen of Axes and if you have an ambition to develop your axe trade to proportions beyond your expectations you will do well to stock Hurd's.



INDIANA
AXE.



HURD'S DOUBLE BIT.



HUBBARD'S
FULL CONCAVE.

Patterns, weights and finishes that will suit your trade—Prices that will suit yourself.

QUOTE
LOW

LEWIS BROS. & CO.

SHIP
QUICK

IMPORTERS AND DISTRIBUTERS.

Address all Correspondence to

TORONTO,
87 York St.

OTTAWA,
54 Queen St.

VANCOUVER,
141 Water St.

MONTREAL

Cordage

Of every description.

Net Mountings,

Sand Line,

Unoiled Cordage,

Marline,

Extra Long Lengths,

Ratline,

Shingle Yarn.

Core Rope,

Oil Well Cables,

Russian Packing,

Deep Sea Lines,

Anchor Line,

Good Transmission Rope,

Engine Packing.

Clothes Lines,

Only Best Material Used.

Log Line

Twine.

Dangerous to use Inferior Cordage.

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Orders

Now

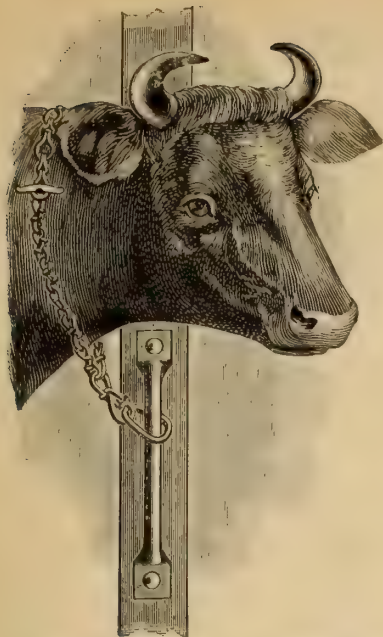
To us and

Recieve

Exceptional

Attention.

Low-priced goods are not always
the cheapest.



ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows the
NIAGARA WIRE LINK
"Dominion" (or
"Short") Type.

Also made in "CLOSED RING," "OPEN RING"
and "THREE CHAIN" TYPES.

Oneida Community Cow Ties can be had of all the leading jobbers.
We invite correspondence where any difficulty is experienced in
obtaining our goods.

Write for New Catalogue.

Address

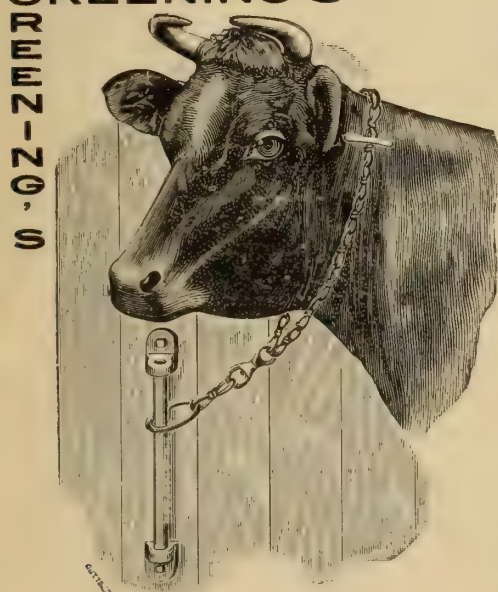
ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.



—FOR SALE BY—

The KENNEDY HARDWARE CO , Limited
49 Colborne St., TORONTO, ONT.

GREENING'S



PATENT COW TIES.

These Cow Ties
have stood the
test for years.
Undoubtedly the
best and strong-
est on the mar-
ket.

It will pay to handle only the best.
A complete line of all sizes ready for shipment.

For Sale by all Jobbers.

THE B. GREENING WIRE CO.,
LIMITED
Hamilton, Ont. Montreal Que

STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

**WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.**

WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
and
TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO. LIMITED
MONTREAL and TORONTO

SHOT.

In ordering, please specify **The Abbey Improved Chilled Shot Co., Ltd., New-castle-on-Tyne.**

N.B.—We also make Hard and Soft Shot but strongly recommend Improved Chilled Shot for penetration.

N.B. The only Company in Great Britain devoting its whole time to Shot making.

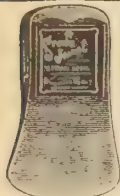
ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and ELECTRO PLATE.**

Ask for our Catalogue and Quotations.



Dundas Axe Works

DUNDAS, CANADA.

Write for Prices

P. BERTRAM, - Manager.

STEEL STAMPS

For Manufacturers of
MACHINERY and METALWARE

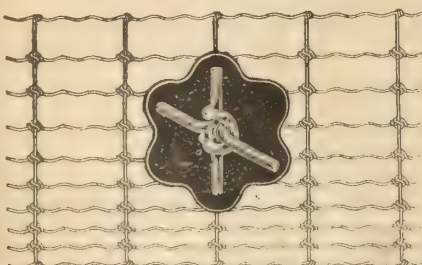
All our work is guaranteed to be satisfactory.

THE PARSONS-IRONS CO.

58 Adelaide St. W., - TORONTO.

Your Customers

the farmers are looking for a fence, strong, serviceable and durable at a reasonable cost. You can supply it to them in the

IDEAL

It is strictly up-to-date and the best value to be had in wire fencing to-day.

A GOOD SELLER

We have a style for every purpose in either heavy or light fencing. Write for catalogue showing fencing and gates.

Coiled-Spring Wire

unexcelled in quality, shipped promptly

THE

McGregor-Banwell Fence Co.

Limited

Walkerville, Ont.

MERRICK, ANDERSON & CO., Winnipeg
Sole Agents for Manitoba and N. W. T.



This design a guarantee of quality

WATERPROOF WRAPPING PAPER

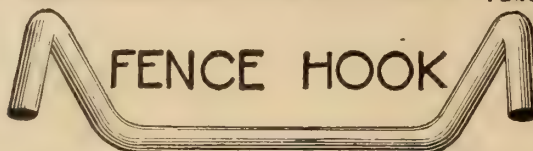
For Express and Long Distance Packages. Put up in rolls 36 in. wide, 250 and 300 yards in a roll. Clean paper on both sides—waterproof substance in the centre therefore it will not soil or stain delicate goods, as ordinary waterproof paper will. Practically odorless. May be used either for case lining or wrapping packages.

Samples and
Prices
with pleasure.

CANADA PAPER CO.
TORONTO LIMITED MONTREAL

GALVANIZED FENCE HOOK

FOR FASTENING WOODEN PICKET ON WIRE FENCES

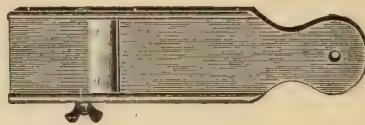


FENCE HOOK

WIRE NAILS, COILED SPRING, BARB and PLAIN FENCE WIRE, OILED and ANNEALED, CLOTHES LINE WIRE, STAPLES, etc.

THE WESTERN WIRE & NAIL CO., Limited,

LONDON, ONT.



"Little Shaver"

Cutest Thing in the Kitchen

Shaves chocolate so thin that it dissolves without stirring. Slices Potatoes, Radishes, Cucumbers, Onions, Apples and all the smaller fruits and vegetables. Made of black walnut. Knife is fine tempered steel.

Canadian Agents:

E. H. GRENFELL & CO.
LONDON, ONT.

MADE ONLY BY

J. M. MAST MFG. CO., Lititz, Pa.

SPRINGS

FLAT—SPIRAL OR VOLUTE

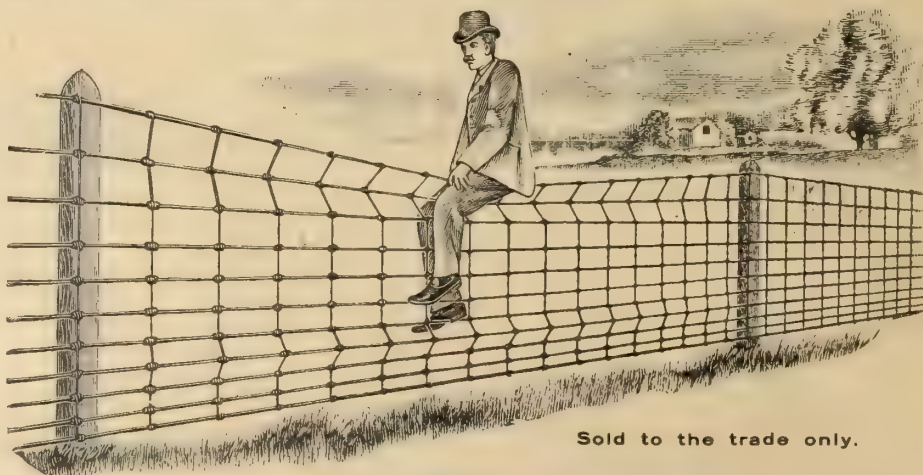
INTERESTING CATALOG MAILED ON APPLICATION

THE WALLACE BARNES CO.

BRISTOL CONN.

DILLON FENCING

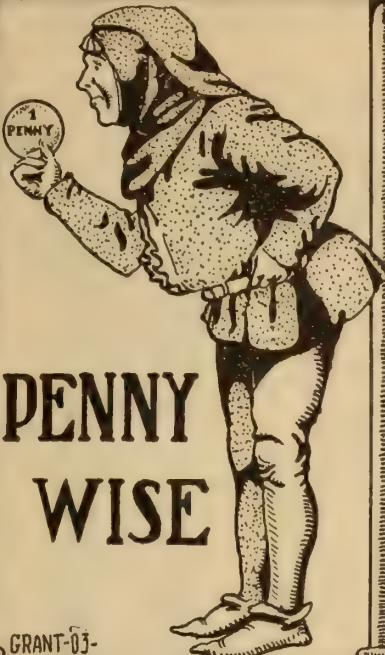
THE HINGE IS COMPLETE, AND WORKS WITH THE UTMOST FREEDOM.



Sold to the trade only.

CAVERHILL, LEARMONT & CO., Agents
at Montreal and Winnipeg.

Manufactured and sold by
OWEN SOUND WIRE FENCE CO., Limited
Owen Sound, Ont.



PENNY WISE

GRANT-03-

The only real value of money lies in making use of it.

The money that lies there in your safe from day to day doesn't do you any good until you commence to use it.

Then its value to you depends on how you use it.

Now, if you would only invest some of it in advertising space in **HARDWARE AND METAL**, and then use the space right you'd have a valuable assistant, working to increase your trade with hardwaremen and to make yourself and your goods better known among them.

Some folks would sooner save (?) the money—but they are "penny wise and pound foolish."

But you're not.
Are you?



POUND FOOLISH

Set Screws, Hex and Square Cap Screws, V. or U.S.S. Thread

British made,
at right prices.

We stock these goods in high quality, and can make good delivery. Catalogue and discount on application. These Products are made on 4-Spindle Automatic Screw Machines and are equal to any goods on the market and we solicit inquiries.

THE ACME LATHE & PRODUCTS CO., LTD.
TRAFFORD PARK, MANCHESTER, ENGLAND

GLAZIERS' DIAMONDS

Sharratt & Newth

43 and 44 Percival Street, - London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

ALSO

Lead Vices,
Carbon Tools,
Etc., Etc.,



Established 181

Agents for Canada: **A. Ramsay & Son, Montreal**



RETURNED
SEP 24 1904
Ent Book 234
Page 12
A. J.

Iver Johnson Revolvers

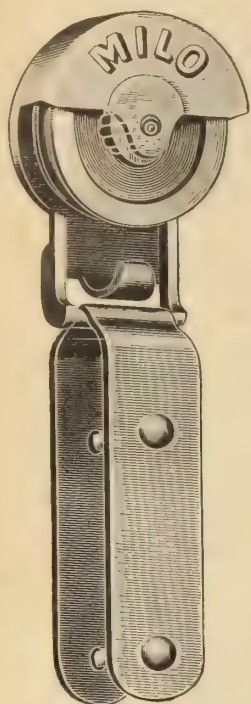
Excel all others in Safety, Accuracy, Durability and Simplicity. They are the largest selling revolvers in the world and therefore the most profitable for the dealer to stock. If you are not selling **Iver Johnson Revolvers** you are losing money.

Write for booklet and prices.

John Bowman Hardware & Coal Co.
LONDON, CANADA.

MILO FLEXIBLE

Barn Door Hanger



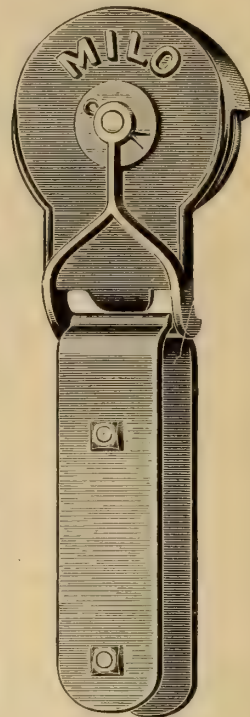
BACK VIEW.

A flexible hanger ; impossible to throw it off the track. Equals any in the market. Made from malleable iron, with wrought iron strips. Roller Bearings. Every hanger is guaranteed to be perfect as to quality and construction.

¶ **Prices on the Milo will interest you.** Get our prices for Barn Door Hangers and Track.

Kennedy Hardware Co., Limited

49 Colborne St., TORONTO.



FRONT VIEW.

SEASONABLE GOODS for PRESERVING TIME.

KEMP'S ENAMELEDWARE

Manufactured in the THREE POPULAR GRADES.

DIAMOND — PEARL — GRANITE



How is your stock ?

It should be very complete at this season.

We can supply your requirements promptly on receipt of order.

We use the utmost care in handling our goods and you can therefore depend on A1 quality.

A full stock of metals always carried in stock, such as Galvanized Iron, Canada Plate, Tinplate, etc., etc.

KEMP MANUFACTURING CO., TORONTO, CAN.

THE LARGEST HYDRAULIC LIFT LOCK IN THE WORLD

ON Saturday last the practical value of the hydraulic lift lock on the Trent Valley Canal at Peterboro was demonstrated when, after informal tests by the engineers in charge of its design and construction, it was officially opened for traffic by Hon. H. R. Emmerson, Minister of Railways and Canals.

The event was one of national importance, because of the possibilities of the Trent Valley Canal as a factor in the transportation problem from Georgian Bay to Lake Ontario. It was of no less interest because of the fact that as it is the largest of its kind in the world, and as it was designed and built by Canadian engineers and almost entirely with Canadian material, its successful operation constitutes a distinct triumph for Canadian ingenuity and initiative.

Only those who are interested in engineering can adequately appreciate the importance of this undertaking, because only they can realize on the one hand the difficulties which have been surmounted, and on the other hand the possibilities of this type of lock, now that its utility in such a large way is demonstrated.

THE FIRST HYDRAULIC LOCK.

The hydraulic lock originated in Anderton, Eng., where one 70 feet long by 14 feet wide, and with a lift of 50 feet, was built for barge accommodation. The second was constructed at La Fontinettes, France; the third at La Louveiore, Belgium. In all, the same principle of hydraulic action has been preserved, but in each case there has been a step forward by the remedy in each lock of constructive defects exist-

ing in its predecessors. Moreover, the conditions at Peterboro were materially different from those existing at the European locks. It is the first of its kind to be completed in America. Thus it is unique, not merely in its magnitude, but in many of its features of design. It is the culmination of development in lock construction, the highest point attained in an important branch of engineering.

THE ENGINEERS AND CONTRACTORS.

The general plans of situation and construction were prepared by R. B. Rogers, M. Inst. C.E., superintending engineer of the canal. On him rested the responsibility of the undertaking, and to him is given a large share of credit for its success. The plans of the embankment and preliminary con-

A detailed description of the mechanism of the lock was given in Hardware and Metal in the issue of November 7 last year.

crete work were prepared by T. A. S. Hay, C.E., who has since become town engineer of Peterboro. The excavation and embankments were started under the supervision of Col. Greenwood, C.E., and completed by Walter J. Francis, C.E.

John Rankin, B.A., Sc., represented the Government as inspecting engineer of the steel work during manufacture and erection. To the Dominion Bridge Works, Montreal, was awarded the contract for the steel work, and with them originated many of the details of construction. Phelps Johnston, manager of the company, took a great interest in the contract, and the mechanical

engineer in charge, D. A. Murphy, B. A., Sc., ensured sound and capable compliance with the specifications. The immense rams were built by John Bertram & Sons, Dundas; the cylinders by the Penn Steel Co., Chester, Pa. The cylinders and a few minor articles bought from England were the only materials imported.

The concrete work, done by Corry & Laverdure, comprises the biggest monolithic mass of concrete in the world. In it are 26,000 cubic yards of concrete, an equal number of barrels being used for the purpose. The bulk of the cement was supplied by the Rathbun Co., Deseronto; the rest by the Owen Sound Cement Works and the Lakefield Cement Co.

Over 120,000 cubic yards, or over a million cubic feet of earth, were removed in the excavation.

The height of lift is 65 feet, or about the height of a five storey building. The external diameter of the cylinders is 8 feet 3 1-2 inches; the diameter of the ram is 7 feet 6 inches.

The pressure in the presses during operation is 600 lbs. to the square inch.

The dimensions of each lock chamber are 140 feet long and 33 feet wide. The approximate weight of water in each chamber is 1,300 tons, and the depth 8 feet.

ADVANTAGES OF THE HYDRAULIC.

The advantages of the hydraulic lift lock over the usual type of lock, when the difference of elevation to be overcome is as large as 65 feet, are many. Of the ordinary locks, five would be necessary to make a fall of 65 feet. The delays incidental to that type of lock are such that to avoid a congestion of

traffic it would be necessary to build the locks in pairs, a total of ten locks altogether. The initial cost would thus considerably exceed that of the one pair of hydraulic locks, which cost about \$500,000.

The time required for lockage through five locks of the regular style would be a serious disadvantage to shippers, while the expense of maintaining the large number of men for five pair of locks would be much greater than is now necessary, only three men being required to send a boat through the hydraulic lock in twelve minutes.

In fact, the advantages of the latter type of lock are such that there is already some talk of installing a similar one on the Erie Canal at Lockport, N. Y., where five double locks are now used to overcome a fall of slightly less than 65 feet.

The completion of this lock makes the Trent Valley waterway navigable for 126 miles from Heeley's Falls to Cobocouk, passing through a fertile agricultural district, touching several important industrial centres, and providing transportation for the limestone and granite quarries of Clear and Stony Lake.

A HISTORY OF THE CANAL.

The history of the canal dates back to 1833, when the Government of Upper Canada took an interest in the project to connect by canal Lake Simcoe with the Bay of Quinte. A survey was made by N. H. Blair, C.E., who gave a favorable report. Following this report some money was spent in building locks. At Confederation, 1867, control of canals was reserved to the Dominion Government, which paid little attention to it till 1881, when T. S. Rubidge, C.E., was appointed to make a survey and prepare estimates of cost. At various times work was resumed on the canal, until in 1896 Mr. Rogers, who had ten years before been appointed superintendent, was sent to Europe to study the hydraulic lift locks in operation there.

As a result of Mr. Rogers' report construction was started that year, and has slowly but steadily progressed until

the successful opening of the lock on Saturday.

WORK STILL TO BE DONE.

With the present opening of this lock and of that section of the canal all that remains to afford continuous navigation from Lake Simcoe to Heeley's Falls is the completion of the superstructure of the hydraulic lock at Balsam Lake. To open the whole waterway from the upper lakes to Lake Ontario, all awaiting accomplishment is the making of an outlet from Lake Couchiching to Georgian Bay, and to connect Rice Lake with Lake Ontario, less than twenty miles, in the shortest route.

THE TRIUMPHANT DAY.

The real triumph in connection with the opening, as far as the engineers were concerned, was not the official opening on Saturday afternoon, but the practical test in the morning, when Messrs. Rogers, Francis, Rankin and Murphy went over to make final arrangements for the afternoon. Hardware and Metal had the pleasure of meeting them after the immense rams had gone down and up, bearing for the first time a representative of the cargo they are destined to raise and lower. As the gates at the lower reach were opened and the barge and small tug moved out into the still waters of the canal, a hearty handshake went round among the engineers. The work they had been engaged on for so many years was completed successfully. There was indeed cause for a feeling of exultation.

At 2 o'clock in the afternoon, in spite of a very heavy shower of rain, which put to considerable inconvenience many of the spectators, the lock was formally opened by Hon. Mr. Emmerson.

Sir William Mulock followed in a speech in which he pointed out that this magnificent enterprise was a standing contradiction to the statement that Canada lacks engineers with ability, initiative and enterprise, and that it was a creditable fact that the great bulk of the materials used were now produced in Canada, and that Canadian contractors were ready to take hold of and able to carry out such an undertaking.

Dr. Mills and Senator Kerr laid especial emphasis on the wisdom of completing the canal at once.

Senator Cox thought the people of Canada had reached this conclusion. From an engineering standpoint the completion and opening of this lock was something for Canada to be proud of. Yet for the direct good of the country the commercial importance of this lock and the stretch of waterways which have been connected by its completion was, he thought, the first thing to be considered. Now that such a large portion of the canal has been completed it is to be hoped that the commercial value of having a waterway of this kind connecting Georgian Bay with the St. Lawrence River will be thoroughly investigated; and if the commercial advantages warrant the outlay, that there will be no delay in the completion of the undertaking.

KNOWING AND DOING.

A VERY business man has some ability as an advertiser. The reason all business men do not have more ability in advertising is that they fail to use what ability they have, and therefore let their talents along this line grow rusty. The best way to be sure of acquiring advertising skill is to try how excellent the advertising can be made. When a merchant puts conscientious consideration into the subject he may be sure of getting satisfactory results from his efforts. The best way to make the advertising better is to make the effort to have it better, and the surest way to see results is to study what will give to the publicity result-bringing features. Some merchants can do this to better advantage than others, but all could do it to a certain extent, and each could have his own standard for improvement. The only way to be sure is to make the effort; and when results fail to come study why they did not come, and then strive to avoid the bad and improve the good features.—Advertising World.

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

THE GOVERNMENT'S TARIFF POLICY

By Hon. W. S. Fielding, Minister of Finance.

THE wars of the future are more likely to be wars of commerce, notwithstanding the great contest that is going on to-day in the Orient.

It is the tariff war that we have most to fear in the future. If other nations will not treat us fairly, then we are obliged in self-defence to adapt our policy to the circumstances.

That does not mean that we should go to extremes. There are some people, well-meaning people, who think that in dealing with our American neighbors we should simply let them fix our tariff. I for one do not admit that we are prepared to take that attitude yet, Mr. Chairman. Then, again, there is the happy medium. High tariffs do not make prosperity. High tariffs have not prevented depression coming on the United States to-day. If we adopt the high tariff there is no more certainty of preventing a depression in Canada than there is by their tariff across the border. I do not think in these things we need to follow the example of our brothers across the border. I think we should map out a policy that will be truly Canadian, that will follow them in anything that is worth while, but a policy that will not follow them when they make mistakes. A moderate tariff is better for all interests than a very high tariff.

THREE REASONS FOR A MODERATE TARIFF.

First, the general interest of the consumer. The consumer is a factor, and we may as well bear him in mind occasionally. The general interests of the consumer will be satisfied with a moderate tariff, whereas if you make it too high he may kick. And it is not in the interests of manufacturers that you should have a constant war between consumer and manufacturer. The second reason is the development of our north-western country. There is a vast agricultural region. For the present, and for the immediate future, they are not likely to have any considerable manufacturing interests. They must be wholly an agricultural people. The value of their products is largely fixed by the prices in the markets many thousands of miles away. It is a very debatable question what you can do for the farmer of the Northwest. If he had a high tariff for everything that he has to buy, there is the danger that instead of having that Northwest filled up with a prosperous and contented people agitations might arise that would antagonize the west as against the east and bring about discord where we might as well

have harmony. Therefore, I say it is the part of wisdom, while giving a reasonable amount of protection to our manufacturers, to modify that protection so that you do not antagonize the mass of the consumers, and especially that you do not antagonize these new settlers in the west. The third reason is this: You would have a lack of stability that is so necessary in a country.

MINDFUL OF THE MANUFACTURERS.

So let me say to the manufacturers of Canada: We believe that the Government give evidence that we are not unmindful of their position. Their position as employers of a large army of men has engaged our attention and evoked our sympathy. We want them to believe that we are as anxious to give them as large advantages as any one can. But we believe, in their own interests, it would not be wise to advocate an excessive tariff. There may be things which ought to be adjusted and changed. When the Tariff Commission comes around and inquires into these things we are willing to listen and make changes and adapt ourselves to the new conditions, just as we did in 1897.

"New occasions teach new duties,
Time makes ancient good uncouth.
He must upward still and onward
Who would keep abreast of truth."

THE BOLDEST OF FISCAL REFORMS.

When it was necessary to travel a beaten path we were content to travel it. When it seemed necessary that we should strike out for ourselves and leave the beaten paths, we did not hesitate to do it. Canada has led the way in some of the boldest fiscal reforms in the nineteenth and twentieth centuries. As an instance of that we have the preferential tariff. For many years the desirability of preferential trade between the mother country and her colonies had been talked about in conference, and in the House and in the press. And, while there was a general feeling that the thing was very desirable, it never got any further. Conferences met and exchanged resolutions with the mother country, and in a year or two held other meetings with the same result. Because why? The demand for preferential trade by the colonies was based upon a condition which at that time was not possible of compliance. It was demanded that as the first step the mother country should place a preferential duty on food products. It would have been a very good thing for Canada, but at that day you might as well have asked the British public for the moon as ask for

that. Our view of the matter was that we had better grant a preferential tariff to Great Britain and await results. We decided to grant a preferential tariff. I venture to say that no movement has had as wide an effect throughout the Empire as that tariff. Materially Canada gained something from the preferential tariff, but Canada gained immensely, too, in sentiment. Materially and sentimentally I believe that tariff was a good thing for Canada and for the Empire. As Kipling said:

"Carry the news to my sisters,
The queens in the east and the south
I have proved faith in the heritage
By more than the word of mouth
They that are wise may follow
When the world's war trumpet blows,
But I I am first in the battle,
Says Our Lady of the Snows."

THE PREFERENTIAL TARIFF.

After the lapse of years in playing the game the other way it was necessary to make a change; it was necessary that somebody should lead, and the Canadian Government led the way. And it has not been without results. We gave the preferential tariff to Great Britain. We gave it "free gratis, for nothing," as they say in the British West Indies. And there we completed a part in the great Imperial game. The West Indies were in trouble, and this laid the foundation of better relations between Canada and the British colonies to the south, and in the years to come we will reap a reward for having cast our bread upon the waters. New Zealand has followed Canada, and given us a preferential tariff. This week we have the information that what was projected some time ago has now been consummated. The great colonies of South Africa have since the first day of July admitted the products of Canada to their markets on terms of preferential trade. See what has happened in the mother country. I said that when we in 1897 took up that question, it would have been absurd to demand of Great Britain that she should then put a tax upon her food products for our benefits. But the effect of the example of Canada and the discussion that has taken place in the various colonies, the general feeling regarding preferential trade throughout the Empire, has proved so great that that very distinguished public man, Mr. Chamberlain, has taken it up. I say, and I have said it in Parliament, that since that question has become one of party strife in the mother country it is not for us to interfere. We in Canada are free to say what we think is good for Canada. We

are free to say what we think may be of some good to the Empire, but if our English brothers do not want to adopt it, it would not be seemly for us to go over there begging them to put a tax on their food products. If it does not develop to-day it will develop in the early future. Every step that has been taken in Australia, New Zealand and the mother country has had its origin in the fact that in 1897 Canada led the way. And then there came a time when we thought we should strike out again. One of the greatest nations of the earth took the liberty of thinking that it could deal with Canada just as it pleased—the great nation of Germany. We had given a preferential tariff to the mother country. We were willing to trade with our German brother on favored-nation terms. We were willing to give him everything that we were willing to give to any other person outside of the British Empire, but he demanded admission into the family circle and that we should give him the same tariff treatment as we gave to our mother country, and when we refused to do that he penalized our trade.

In regard to the dumping process, we have provided a remedy which we believe will be practicable. I have no doubt my friend, Mr. Paterson, will have a good deal of trouble in administering it, but that is what we have him at Ottawa for, and I have no doubt he will be able to deal with it and make it the effective instrument which we desire. And if the instrument proves that it is not strong enough, that there is anything defective in it, we will make it good.

HONESTY IN ADVERTISING.

THE chief executive officer of one of the largest financial institutions in this city called recently upon one of his subordinates for a schedule of the advertising that was being placed for the company through an agency. The list contained the titles of more than half a dozen publications that experienced advertisers and advertising agencies know to be of no value whatever. As the concern that was acting as an intermediary in placing the advertisements has been in business a number of years, it doubtless knew, anyway, it should have known, the absolutely worthless character of the mediums to which reference is made. As a matter of fact, many hundreds, yes, thousands of dollars had been handed over by the corporation that was seeking publicity to the publishers of papers that have next to no circulation or to those whose periodicals do not circulate among per-

sons who could or would be attracted by the advertisements under consideration. If the agency that was charged with placing the business was ignorant of the value and character of the mediums used, it was obviously culpably negligent in the discharge of its duties. On the other hand, the fact that the agency has been in business sufficiently long to determine the value of various publications and also the fact that the least valuable mediums, such as were conspicuous on the list mentioned, pay much larger commissions to advertising agents, arouse the suspicion that the list of papers used was made up with special reference to the agent's income in handling the business.

This episode, while not without precedent, is deserving of more than passing notice by those who annually spend thousands of dollars in their efforts to attract attention to their facilities for transacting banking or trust company business, to securities they desire to market, to the reorganization of corporations or to the readjustment of their capitalization. In too many cases the matter of publicity, once decided upon by those who have the actual business in hand, is left, as in the case cited, to some subordinate who knows little or nothing of the art or business of advertising, or who possibly cares less about it if the agency that secures the business from him makes it worth his while to favor it by handing over to him a substantial part of the commission that publishers allow to agencies for their services in obtaining, directing and concentrating business.

Transactions of this sort are manifestly dishonest, yet they are made every day in the week, and they are possible because the principals in the transaction underestimate the details of their efforts to reach the public. There is, without doubt, less of this sort of thing in commercial advertising than in some other lines, as manufacturers and merchants are constantly in the market for publicity and their profits are so small, as compared with those engaged in financial operations, that they figure as closely on their advertising as they do on the labor they employ and the goods they handle. As is well known, some of the largest manufacturers and distributors of staple products employ men experienced in advertising to manage that part of their business, but bankers and financial institutions, except in the cases of some of the larger

life insurance companies, do not require the services of such an expert.

There is, therefore, all the more reason why they should look carefully to the honesty and experience of those to whom they entrust the handling of their publicity. The honest agent will never advise a client to expend a dollar in a discredited or worthless publication. On the contrary, it is a part of his business to see that his principal escapes all such pitfalls that are constantly being set for the inexperienced or credulous advertiser. It is easy enough to exhaust an advertising appropriation by distributing the money among first-class mediums. There are enough of them, and it is only by adhering to them that the best results can be obtained.—Editorial from the Wall Street Summary, June 29, 1904.

SPECIAL ADVERTISING SCHEMES.

EVEN in such advertising as barn and fence signs there is a wide difference between the ordinary and the most effective. To simply say: "You can buy goods cheaper of John Brown," would not be good advertising, but to make it generally known that "Brown is sole agent for Sheffield Plows" is what nearly every farmer wants to know and brings inquiries and sales.

The posting of small bills and paper posters along roads, on bridges, mile posts, etc., is almost worthless as advertising. A sale bill with the picture of a horse will sometimes pay in such locations, but never a hardware ad.

Securing classified lists of tradesmen may, under some conditions, be made of service, as many new customers can be reached by personal letters on special advertising. It is always possible to secure correct lists of gardeners, green houses, blacksmiths, wagon makers, painters, moulders, machinists, etc. They should then be kept as classified lists for future use. In nearly every county some one in the office of auditor, as a rule, gets up a tax duplicate list, which is valuable, and can be had at a nominal price. When the time for garden seeds is at hand a personal letter and price list should be sent to each one.

Every shop, factory and institution where numbers are employed use pay envelopes, which are handed to each employe four or five times a month. The privilege of furnishing them is not a great expense, and no one thing pays better than this. Every man or woman opening their envelope sees your name, your business and line of goods on the

back. Many of them carry them as a pocketbook until next payday, or if thrown away they are frequently picked up and looked at. Following up this same scheme, for a consideration, in many towns you are allowed to put your ad. on the back of street car tickets. While this is good, perhaps, it does not carry with it the effect the pay envelope does.

Prices on goods, in plain figures, outside the door as well as inside the store, and in the clean and well dressed show windows stop many a man and bring him into your place, more than likely for the first time. It may be only to make inquiry, but he will be sure to come again. Busy days and busy people lead them to get through their buying as quickly as possible. They are hunting the short way; they are looking for prices, and are gratified when they find them without asking.

And so it is all the way through, there are a hundred and one ways of getting at and winning new trade. They must be borne in mind and used on all occasions to your benefit. Knowing human nature and the human heart has much to do with the success of any and all trade winning methods.

CAPITAL AND LABOR ORGANIZATIONS.

By C. M. Schwab.

THE cause of the industrial depression in the United States is lack of confidence. Money is plentiful and the people are only waiting to see how the cat will jump. I have traveled from New York to San Francisco and saw abundant crops and evidences of prosperity everywhere. A wave of diffidence has struck the country. This comes periodically. There will be no bank failures this time, as the banks are on a better basis than in 1893. Prospects are good and I expect a speedy return of prosperity of a nature independent of Wall street.

"I am in favor of all organizations of labor and capital. This has been my principle all my life, and I would not stultify myself by saying I am opposed to labor unions. What I do oppose is the fallacy upon which labor unions in America are built. They are constructed upon the principle of how little a man can do for the largest return, and that all men, regardless of ability, must be reduced to an equality of output. This cripples ability and enterprise by putting the best man on the same plane as the worst.

"John Mitchell and other labor leaders with whom I have talked, agree with me that if the principle is not changed American industries will be crippled. Labor unions ought not to attempt to restrict the output, and economically and humanely it is a mistake to treat employees badly. Labor organizations will ultimately adjust themselves to existing conditions, and likewise, the trusts must remedy their evils.

"The reason for the formation of large consolidations is to sell their products cheaper to the consumer. Trusts which endeavor to raise prices ought not to live. Restriction of output should be abandoned by unions and over-consolidation should be condemned by the trusts. However, all these things are bound to adjust themselves."

Rugs and painted or varnished floors are the style now. The day of the dust and germ collecting carpet is past.

THE SHERWIN-WILLIAMS FLOOR FINISHES

FOR FINISHING OLD AND NEW FLOORS IN ANY STYLE DESIRED

are the best and most profitable for both dealer and user. No other floor finishes are so well advertised, give so much satisfaction and pay the dealer such good, permanent profit.

The line comprises:

THE S-W. INSIDE FLOOR PAINT—For an effective inside finish.

THE S-W. PORCH FLOOR PAINT—A lasting outside floor paint.

FLOORLAC (registered)—A high gloss stain imitating natural wood.

MAR-NOT—A tough, elastic varnish.

THE S-W. FLOOR-WAX—For easy and "glassy" polishing.

THE S-W. CRACK AND SEAM FILLER—For filling seams and cracks in floors.

If you want the best and the most of the floor finish trade in your territory, stock up with one or more of the S-W. Floor Finishes now. Send for booklet and prices today.



THE SHERWIN-WILLIAMS Co.

PAINT AND VARNISH MAKERS

CANADIAN DIVISION

HEADQUARTERS AND PLANT: 21 St. Antoine St., Montreal.

DEPOTS: 86 York St., Toronto, and 147 Bannatyne St. E., Winnipeg.

E 1193

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Machine Tools.

HARDWARE AND METAL has received from the Newton Machine Tool Works, Philadelphia, their general catalogue No. 36. In this catalogue are described and illustrated all kinds of machine tools, but of special interest is the double spindle milling machine for keyseating. This milling machine does the same work as a cotter drill, but much more quickly. The company have also sent copies of catalogues Nos. 35, 37 and 38. Catalogue No. 35 describes and illustrates fully the milling machine for keyseating. No. 37 is devoted to rotary planing machines, while No. 38 describes and illustrates slotting machines especially designed for the use of high speed steel. Readers of

Hardware and Metal wishing to secure any of these catalogues should apply to the Newton Machine Tool Works, Philadelphia, mentioning Hardware and Metal.

Pneumatic Tools.

The Philadelphia Pneumatic Tool Co. are sending out a neat booklet entitled, "The Care and Use of Pneumatic Tools." This booklet contains valuable information for users of pneumatic tools. Readers of Hardware and Metal may secure a copy of this booklet by applying to the Philadelphia Pneumatic Tool Co., Philadelphia.

Air and Gas Compressors.

Hardware and Metal has received from the Rand Drill Co., New York, and whose Canadian branch is at Sherbrooke, Quebec, their general catalogue of air and gas compressors. Besides being very interesting technically, this catalogue presents a very handsome appearance both inside and outside. The illustrations and typographical execution are very good. Readers of Hardware and Metal interested in compressors should secure one of these catalogues.

Business Changes

ONTARIO.

SUGGETT & CO., tinsmiths, Milton, have assigned to G. S. Scott, of Hamilton; meeting of creditors on the 14th inst.

G. Lint, general merchant, Kohler, is dead.

John O'Connor, contractor, Ottawa, is dead.

The Wakefield Mica Co., Limited, Ottawa, have sold their mine.

J. T. Gibson, blacksmith, Wheatley, has sold out to W. F. Plum.

Wm. Buchanan, harness maker, Aylmer, has sold out to W. P. Matthews.

Shushack & Yerick, general merchants, Wilno, have sold out at 75c on the dollar.

Arthur Meredith, of Thomas Meredith & Co., dealers in hardware, paints, etc., Toronto, is dead.

Cullen-Johnson Brass Mfg. Co., Limited, wholesale plumbers' supplies, have been succeeded by the Dominion Brass Works Limited, Port Colborne.

QUEBEC.

Viellet & Auger, brick manufacturers, St. Tite, have dissolved.

St. Arnaud & Duval, general merchants, Batiscan, have registered.

The assets of J. L. Sequin, general merchant, St. Simon, have been sold.

L. C. Masson, sash and door manufacturer, Montreal, has been burnt out.

J. R. Gervais, general merchant, Mount Carmel, has assigned to Lamarque & Benoit.

The assets of H. Rondeau, general merchant, St. Norbert, (Berthier Co.,) have been sold.

A statement of the affairs of J. H. Therien, general merchant, St. Gregoire, is being prepared.

Edward McDougall has registered as president of the Canadian Iron & Foundry Co. Montreal.

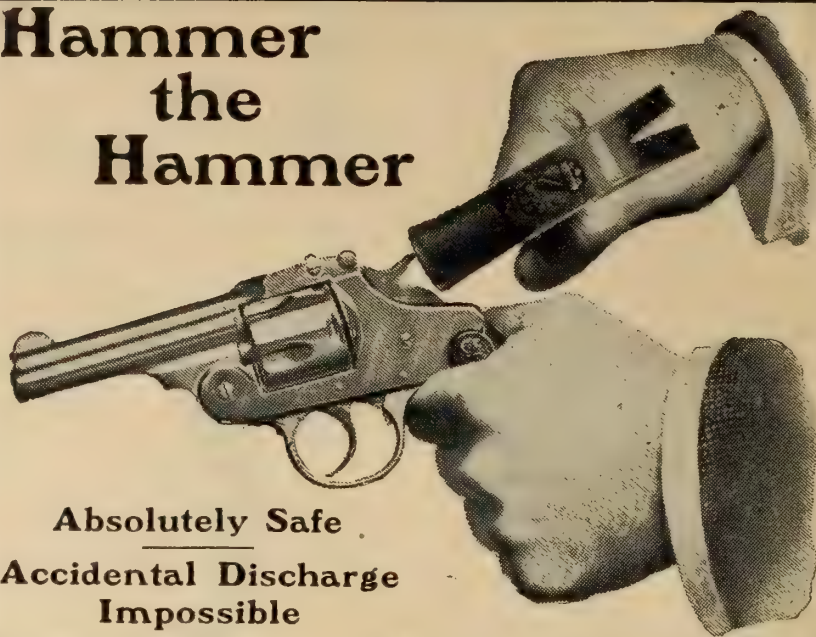
V. E. Paradis has been appointed curator to L. H. Chouinard, general merchant, Matane.

Julien & Frere., general merchants, St. Boniface De Shawinigan, have dissolved partnership.

A. Ravenelle has registered under the style of J. A. Dupont & Cie., general merchants, Grand Mere.

Henry Lacrois has registered under

Hammer the Hammer



Absolutely Safe
Accidental Discharge
Impossible

No Danger.

It's an IVER JOHNSON.

An Iver Johnson Revolver **cannot** be fired unless you pull the trigger.

Drop it—throw it—toss it—**Hammer the Hammer** if you like, it is impossible to discharge it, unless you pull the trigger.

Made possible by a patented safety device that stands the test. Used exclusively on Iver Johnson Revolvers.

Any wonder the trade prefer them, and the public demand them?

Send for literature, mailed free upon receipt of request.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS.

the style of the Shawinigan Falls Roofing Paper Co., Shawinigan Falls.

W. W. Lachance has registered under the style of the Kennedy Valve Mfg. Co., manufacturers' agents, Montreal.

L. P. H. and Henri Grandbois have registered under the style of M. A. Grandbois, general merchant and lumberman, St. Casimir.

The Hall Engineering Works, Montreal, have dissolved partnership. Thomas Hall and Thomas O. Sinclair have registered under same style.

PRINCE EDWARD ISLAND.

McDonald & Westaway, general merchants, Georgetown, have gone out of business.

W. W. Jenkins, general merchant, Georgetown, has opened a branch under the style of Jenkins, Sons & Co.

MANITOBA AND N.W.T.

J. R. Turnbull, contractor, Winnipeg, is dead.

David Clayton, harness maker, Sintaluta, has sold out.

Olds Lumber & Hardware Co., Olds, have sold out to A. E. Clemens.

Nysten & Rudy, general merchants, Hanley, have dissolved partnership.

F. W. Anderson, general merchant, Saltoun, is removing to Abernethy.

Dallin Bros., general merchants, Frobisher, have sold out to Scott Bros.

M. Krolik, general merchant, Grenfell, has advertised his business for sale.

H. P. McLeod, general merchant, Okotoks, has sold out to G. C. Chester.

Mrs. R. McDonald, harness maker, Belmont, has sold out to F. F. Sparks.

W. Wilson, blacksmith, Cypress River, has been succeeded by G. Cline.

M. Krushen & Co., general merchants, Yorkton, have dissolved partnership; M. Krushen continues.

Gaetz and Clemens, hardware dealers, Ledue, have dissolved partnership. C. W. Gaetz continues.

P. H. Sutherland, general merchant, Selkirk West, has assigned to C. H. Newton. Meeting of creditors on 11th inst.

BRITISH COLUMBIA.

J. T. Taylor, general merchant, Okanagan Landing, has suffered loss by fire.

July 16, 1904

HARDWARE AND METAL

H. S. HOWLAND, SONS & CO.

WHOLESALE
ONLY.

Telephone,
Office, Park 1584.

TEMPORARY WAREHOUSE:

212-218 Cowan Avenue.

SAMPLE ROOM at 21 Scott Street (Telephone

Main 4056)

(Where Orders may be left if not convenient to visit our Warehouse at Parkdale).

HAY FORKS, Etc.

LIMITED
ONLY
WHOLESALE.

Telephone,
Warehouse, Park 1585.

2-Tine Hay Forks.

3-Tine Hay Forks.

RETURNED
JUL 18 1904



Straw and Barley Forks.

RETURNED
JUL 18 1904

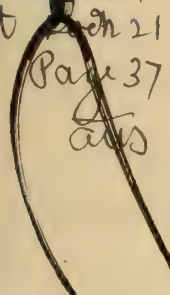


Straight or Bent Handle.
Plain or Strapped.

RETURNED

JUL 18 1904

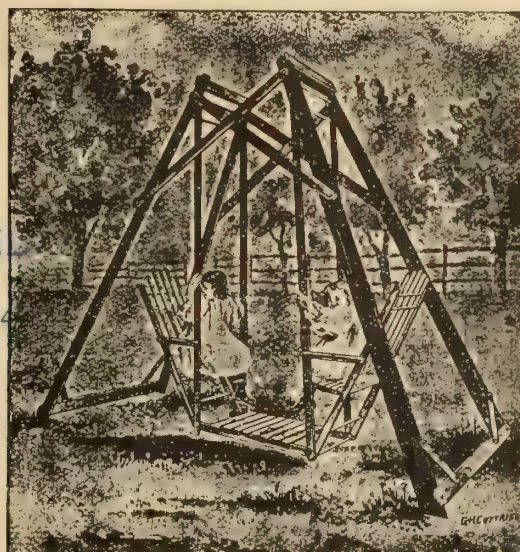
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Straight or Bent Handle.
Plain or Strapped.

RETURNED

JUL 18 1904



"Leader" Lawn Swing.

Health to the children.

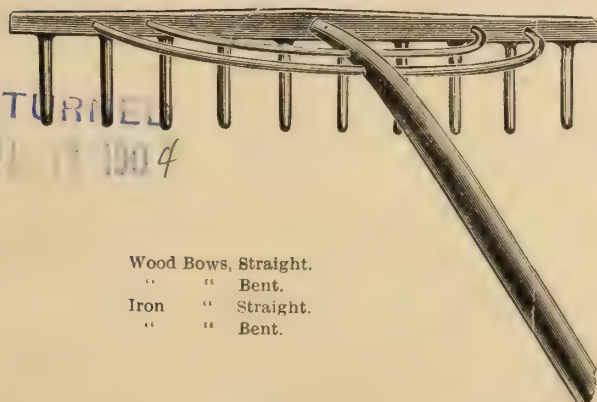
Rest to the tired.

Pleasure to all.

HAY RAKES.

RETURNED

JUL 18 1904



Wood Bows, Straight.

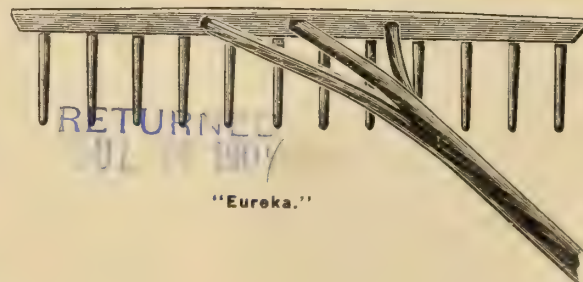
" " Bent.

Iron " Straight.

" " Bent.

RETURNED

JUL 18 1904



"Eureka."

FOR A FULLER LINE OF HARVEST TOOLS SEE OUR HARDWARE CATALOGUE.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.

Factory: Dufferin Street, Toronto, Ont.

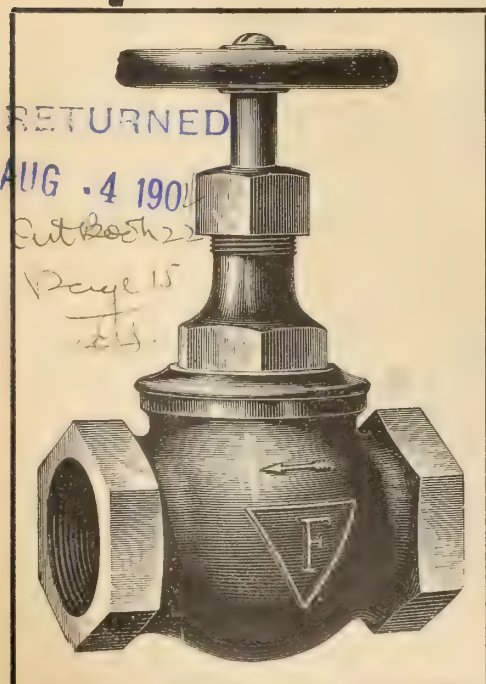
Our prices are right.

TRUE BRAND CUTLERY.**POCKET CUTLERY****GUARANTEED QUALITY.****RAZORS
SCISSORS****BEST GOODS****RIGHT PRICES****E. F. WALTER & CO.,** 166 and 168 McGill St., **Montreal**

PRICE is a good thing,—but,
QUALITY is better.

Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

Wilcox Mfg. Co. of Ontario, Limited
LONDON, ONT.**UP AND DOWN THE LINE**

Whether a Steam, Hot Water, Air, Stock or any other kind of a line, if you want to be certain that you have the best valves that money and skill can produce, and which the severe test of actual service has proven to be superior to any others, see that you have a

***Fairbanks
Renewable Disc Valve***

Supplied with Asbestos Discs, Brass Discs, Soft Metal Discs, or Leather Discs, to suit any and all requirements. Be sure to specify the conditions, as with discs the same as anything else the conditions must be known.

The Fairbanks Company

MONTREAL

TORONTO

VANCOUVER

WINNIPEG

MACHINERY

MACHINERY MARKET.

Quebec.

Office of **HARDWARE AND METAL**,
232 McGill Street, Montreal.
Montreal, July 14, 1904.

QUIETNESS in all lines of the machinery business is apparent this week. Several large deals are under negotiation, but as yet have not materialized. A couple of good orders are reported, but beyond these and a few smaller sales, there seems to be little business doing. One of the orders noted was for a complete sawmill equipment, including water wheel, shafting, pulleys, machinery and supplies. The other was for four hoisting engines to be used on construction work.

The electrical machinery market is dull, and there is little moving in that line. Inquiries are coming in very readily, which is a good omen for the near future.

Ontario.

Office of **HARDWARE AND METAL**,
10 Front street east,
Toronto, July 15, 1904.

THERE is nothing of importance to be noted on the local machinery market this week. No large orders have been placed with local dealers, and general conditions are the same as were reported last issue. There have been quite a few inquiries for both iron and wood working machinery. Indeed, inquiries go to indicate a more confident feeling in the line of machine tools. Inquiries for engines and boilers still come in well. The demand for electrical machinery still continues fairly good.

The Use of Superheated Steam.

IN speaking of the consumption by an engine of a certain number of pounds of superheated steam, per horse power hour, a true comparison between that and an engine using saturated steam is by no means given. The comparison ought to be between the heat units converted into work in each case. Prof. Storm Bull believes in the use of a high degree of superheat for engines. When this is desired, it is necessary that the superheater coils be so placed that the hot gases will strike

them long before they have been cooled sufficiently to allow them to escape into the chimney. In a paper read by him before the Western Society of Engineers, he discusses the matter fully, and lays special stress on the economy of superheated steam. The difficulties due to the use of high temperatures in the engine cylinder, due to expansion, and difficulty in lubrication, have not been surmounted, the development in design having followed the lines of the gas engine. He believes that both the double acting gas engine and the double acting engine for superheated steam will be the types used in the future. Corliss valves are not adapted for the use of steam superheated by about 200 degrees Fahr., double beat, or drop valves being essential.

Steam turbines will benefit even more than the steam engine by the use of superheated steam. Results of several tests of engines using superheated steam show a gain of economy of up to 26 per cent., due to the use of the superheater. The superheat in these tests ranged up to 340 degrees, with an equivalent saturated steam consumption of 10.01 lbs. per indicated horse power per hour, with 311 degrees Fahr. superheat, the steam pressure being 145 lbs. per square inch by the gauge, the cylinders being 12½ and 22 in. diameter, and 32½ in. stroke running at 137 revolutions per minute.

Experimental results also show that the cut-off has very much less influence on the economy of an engine using superheated steam than with saturated, there being in one case very little difference in economy between a cut-off of 16 per cent. and one of 48 per cent. Also the tests showing the interchange of heat between the steam and cylinder walls show that it is rapidly reduced with increased superheat, and to this fact is largely due the economy in superheating.

Tests of a compound engine using steam at 100 lbs. gauge pressure, show that the amount of heat given to cylinder walls with 156 degrees of superheat is only one-fourth of that with saturated steam. With a triple expansion engine using steam at 138 lbs. gauge pressure, and with 140 degrees of superheat, tests show only about 20 per

cent. of an interchange of heat in high pressure cylinders. It is shown that the interest on the extra cost of installation with depreciation, together with that due to the increased quantity of the best oil which must be used, is greatly overbalanced by the saving in coal in the great majority of cases where superheating is adopted.

Machinery and Electrical Notes.

NEGOTIATIONS are in progress for the transference of the St. Thomas Street Railway System from the city to the Southwestern Traction Co. As a municipal enterprise the scheme has not been a financial success, but it is thought that the Southwestern Traction Co. can make it a paying part of their system.

It is expected that it will take \$100,000 to thoroughly remodel the Kingston electric lighting plant.

The Canadian Division of the Brotherhood of Locomotive Engineers will meet in Montreal this year during the early part of August.

The Albion Iron Works, Victoria, B. C., has been purchased by Bullen Bros., proprietors of the Victoria & Esquimalt Railway. The plant is valued at nearly \$500,000.

It is said that negotiations for the amalgamation of the Great Northern Railway Co. of Canada and the Chateaugay and Northern Railway are making good progress.

The Iron and Steel Co. of Canada, Limited, Belleville, Ont., announce the operations will commence in their new rolling mills on July 18. The immediate product will be bar iron, washers and all kinds of spikes.

The Grand Trunk Railway have decided to erect a new round house in London. The structure will cover over an acre of ground, and will contain stalls for 48 locomotives. The estimated cost of the round house is \$75,000. It will be up-to-date in every respect.

The boiler in the saw mill of Peters & Cairns, near Haliburton, Ont., exploded recently, causing two fatalities. The mill and machinery, valued at \$8,000, are a complete wreck, besides which there is the loss of this season's cut of lumber, shingles, etc.

The Laurie Engine Co., of Montreal, have just placed four new hoisting engines, 8x12, with Peter Lyall, to be used by him on the construction of the new sheds at the harbor. The above company have recently added a line of warehouse trucks, contractors' wheel barrows and scrapers.

WOOD WORKING MACHINERY.

THERE is no line of machinery manufactured in Canada that is of more importance than wood working machines. The MacGregor, Gouriay Co., Ltd., Galt, Ont., manufacture a double cylinder surfacer with divided rolls and pressure bar, and variable feed. The gears of this machine are all cut from the solid, and all journals are machine ground, and perfectly true.

There are many new features in this machine that will be appreciated. The under head cuts first and is very close to the top head. This means that the stock, being first surfaced on the under

easily, because the machine is so compact there is little friction on the bed.

The under head pulls out at side of machine for setting and sharpening the knives. When in place it is locked securely its whole length. The cut of the lower cylinder may be increased or decreased by raising or lowering the platen in front of it, which is operated by a hand wheel.

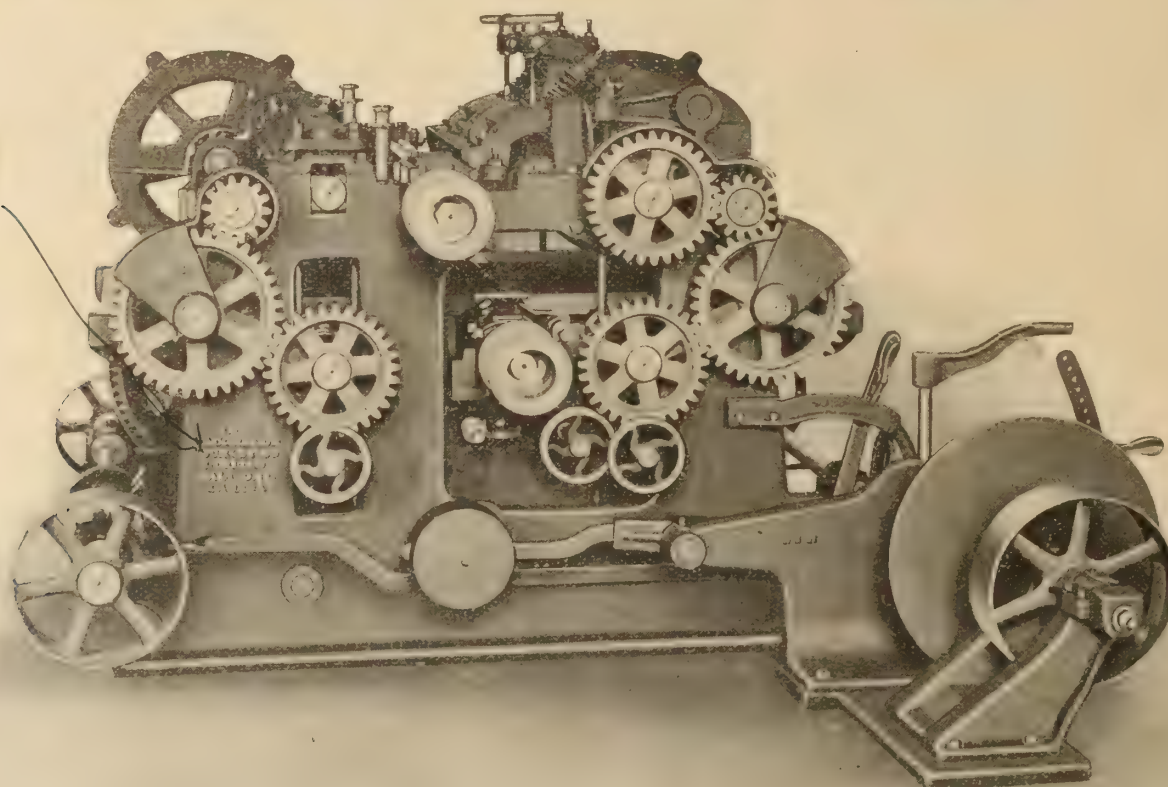
The cylinder boxes are massive and rigid; by loosening the cap it will take up by its own weight all wear—no liners are used. If it is necessary at any time to babbit these boxes, they can be taken out and the work done at a near-

of two boards varying in thickness.

By the use of variable feed the operator can vary or regulate the rate of feed from nothing to the full capacity of the machine, which is of ample strength to withstand the hard and continuous service to which it is subjected by reason of the rapid rate of feed, which can be carried regardless of the depth of the cut, width of material, or quality of wood. The bed raises and lowers by hand or power, as desired. This surfacer is made in one size only, 30 inches wide and opening 12 inches in thickness.

Tight and loose pulleys are 16 x 8 1-2, and should make 900 revolutions per minute.

Weight, 8,900 lbs.



side, must lie perfectly flat and rigid on the platen under the top head, enabling that head to do better work than if the lumber rested on a rough surface.

The chip-breaker is hung in front of the top head and so pivoted that it swings in a circle of the cutter head; a chip-breaker as it lifts, if pivoted elsewhere, swings away from the knife just when it is most needed. Again, the heads being so close together, stock passing through must be accurately thickened; warped or twisted boards are sure to be dressed both sides, and freed

by bench, if more convenient. The spindle bearings are machine ground perfectly true.

In a double surfacer the proper alignment for the lower rolls for handling of wet stock is not right when working dry material. In this tool the lower feed rolls are adjusted simultaneously at both ends by means of hand wheels. This quick adjustment is found very convenient and satisfactory.

The feed consists of four 8-inch rolls, driven by a train of powerful gearing. The feeding-in roll is divided, admitting

Lead Production at Nelson.

"G. O. Buchanan, inspector of lead bounties, is in the city and is making his headquarters at the Strathcona," says the Nelson News of Wednesday. He says: "The production of lead at present is at the rate of 30,000 tons per annum. This output was never exceeded in this country but once, and that was in 1900, when the output was 31,000 tons, the production that year having been stimulated by the extraordinary prices in London. The country is in a better condition to take care of its lead than it has ever been."

IT WILL PAY YOU



to stock the best globe valves "made in Canada."

KERR'S are made of the best steam metal, accurately fitted and perfectly tight.

CATALOGUE FOR THE ASKING.

THE KERR ENGINE CO.,
WALKERVILLE, ONT. Limited

SPECIFY



INJECTORS

PENBERTHY INJECTOR CO.,
LIMITED.

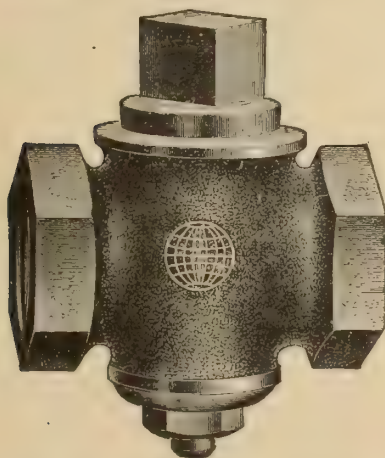
BRASS MFRS. Windsor, Ont.

"GLOBE"

STEAM and GAS

COCKS.

"GUARANTEED SATISFACTORY."



Catalogue "C" and Discount Sheet on application.

The Globe Brass Works
Detroit, U.S.A.

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

Don't Forget the Name... NEWMAN'S INVINCIBLE FLOOR SPRINGS

Strong, Quick, Reliable, Effective.

Will close a door against any pressure of wind. Far ahead of ordinary door springs, pneumatic or otherwise. Ask your wholesaler.

W. NEWMAN & SONS, Birmingham.

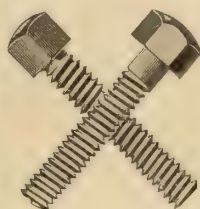
BABBIT

NO. 1
STAR
SPECIAL
HERCULES
METALLIC
IMPERIAL

QUALITY & PRICE TO SUIT
ALL GRADES OF WORK.

CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



Cap Screws

Set Screws

Machine Screws

Cold Pressed Nuts

FINISHED AND SEMI-FINISHED

Special Milled Work, etc.

SPECIAL DISCOUNTS TO THE TRADE

CANADA FOUNDRY COMPANY

LIMITED

Head Office and Works, TORONTO, ONT.

District Offices — Montreal, Halifax, Ottawa, Winnipeg, Vancouver, Rossland.

Corundum FOR Polishing

THE OPINION OF A USER:

We wish to say a few words in favor of your Craig Mine Crystal Corundum which we have been using quite extensively for the past six months. We have 28 knife blade grinding machines on which we have been using No. 40 corundum steadily for six months. We find it will do just double the work that any emery that we have ever had would do and that it is impossible to burn a blade with it, which is a great advantage to us as all emery will burn and consequently draw the temper. We are using finer grades with equal results. Wheels that have lasted us from ten to twelve days with emery are now lasting us from twenty-four to twenty-six with corundum. This is not only a saving in emery but is a great saving of other materials used in the wheels, as well as a saving in the time of making wheels as we are not obliged to make them so often. Besides the saving in time the work itself is very much more satisfactory. We can conscientiously recommend Craig Mine Crystal Corundum to all users of emery.

Yours truly,

FACTORY "G,"

Norwich, Conn., Feb. 15, 1902.

INTERNATIONAL SILVER CO.

We can supply promptly in any quantity.

Send for booklet and samples. ❀ ❀ ❀

The Canada Corundum Company, Limited

TORONTO, CANADA.

Damascus Steel.

A NUMBER of years ago it was announced that the old process of tempering steel, the art of which has long been lost, had been re-discovered by S. G. Dawson, of Des Moines, and a company was then started on a small scale to manufacture the steel. The events which followed this read almost like romance, and have their culminating point in the announcement made a short time ago by the Damascus Steel Co., which was organized and capitalized at \$2,000,000, that the process was impracticable.

Eight years ago, when the first company was formed, Mr. Dawson quarrelled with his son-in-law of a week, and on Christmas Eve shot and killed him. For this he was sent to the penitentiary. His formula was locked in a safety deposit vault, and all efforts of the stockholders to get this met discouragement in the courts. He was pardoned two years ago on the representation that his imprisonment was keeping from the world a valuable secret. Before this was accomplished, litigation covering many months had to be undergone, and it resulted in the stockholders being defeated, and the key being allowed to remain in Mr. Dawson's possession. As the secret was deemed inestimable, and on account of the fact that the prisoner had been a prominent man, his pardon was secured. He returned from prison a broken man, pale and gray, but with confidence and determination that his wonderful secret would be worth millions. He interested some of the most prominent people of Des Moines, which resulted in the company being organized, as mentioned above.

A plant in New Brighton was purchased, where experiments have been going on. The operations became very active, much of the stock was sold, and for a year the company prospered. While the tests preliminary to the wholesale manufacture of the crucible steel were being made, promoters and stockholders were sanguine over the success of the enterprise. Then an obstacle arose, which was at first thought to be trifling, and that it would be overcome by a little experimenting and change in the process. This was Mr. Dawson's first experience in making steel to sell in large quantities, and as he had overcome stumbling blocks larger than this, in his first experiments, which led to

the discovery, he attacked the new problem with confidence. He tried one operation after another, which always resulted in failure. The fact stared him in the face that this process, which was supposed to be the lost Damascus art of steel making, was of no use for making large quantities with a uniform grade. Week after week, and month after month passed, and the undaunted inventor kept fighting against the impossible. Finally despair got the best of the fight, and a letter has just been issued to the stockholders, saying that the attempt to manufacture crucible steel by this process would be abandoned. In this letter it states that the great difficulty that had been met with, and one which proved the Waterloo of the inventor, was to make the steel uniform, and it was found out finally that this could not be done. The affairs of the company are being closed up by a committee appointed, and a meeting of the stockholders is to be held at East Orange, N. J., on July 11.

Choosing a Boiler.

FOSTER'S HAND BOOK gives the following points to be remembered in the selection of a boiler: Suitability of furnace and boiler to kind of fuel; efficiency as to evaporative results; rapidity of steaming, including water capacity for given power and water surfaces for given power; steam keeping qualities; safety from explosion; floor space required; portability, and ease with which boiler can be removed when old, for replacement by a new boiler; amount of, ease and rapidity of repairs; simplicity and fewness of parts; ability to stand forcing in case of necessity; price, including cost of freight and setting; durability and reliability; ease of cleaning and inspection both inside and outside; freedom from excessive strains due to unequal expansion and ability to stand same; efficient natural circulation of water; absence of joints or seams where flames may impinge.

For central stations it is necessary to arrange for a number of boilers rather than one or two large ones. The size of unit adopted will depend to some extent on the character of the expected load diagram. With a number of boilers the cost of the reserve plant is reduced, though beyond, say six, there is less object in increasing the number on this account.

CONDENSED MACHINERY ADS.

YEARLY CONTRACT RATES.

100 words, each insertion, 1 year.....	\$30 00
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MACHINERY WANTED.

Notices under this heading inserted free for subscribers to **HARDWARE AND METAL**

VERTICAL engine wanted; about 28 x 28, with fly wheel, about 16 feet diameter, 12" x 12" rim. Box 5, Globe, Hamilton.

WANTED — Foot lathe; describe and state lowest price. Box M 31, **HARDWARE AND METAL**, Toronto.

WANTED—36 x 36 in. x 10 f. planer; 16 ft. lathe, 24 in. swing; and No. 500 belt drivers' drop hammer. Address Box M 145, **HARDWARE AND METAL**, Toronto.

CIRCULAR shears and double seaming machine, in good order. Moore Bros., Bradford, Ont. (29)

A SECOND-HAND swing (heading) sawing machine; give best prices. Box M 57, **HARDWARE AND METAL**.

POWER press for stamping, weighing 850 to 1,500 lbs. George Coleman, Ridout street, London, Ont.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

ENGINE LATHE—Swings 17 in. over shears, takes 4 ft. between centres; good order; cheap for cash. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

IRON PLANER—24 in. x 24 in. x 6 ft., second-hand in first-class condition, for sale; a quick turn over. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

NEW STATIONARY ENGINES — 20 x 24 Waterous sawmill engine; 14 x 18 Waterous sawmill engine; 9 x 10 McEwen engine; 13 x 14 McEwen engine. Waterous, Brantford.

THE FAIRBANKS CO.—Temporary warehouse, 124 Bay—standard scales, valves, trucks, letter presses, shafting, hangers, pulleys, belting, mill supplies, machine tools; "Fairbanks" gas and gasoline engines; write for price list.

A N 8-ft. Irwin trussed cornice break, in good condition. J. O. Cadham, Portage la Prairie. (32)

BUSINESS CHANCES.

A CHANCE for practical machinists, shop and tools for sale or rent; central location; three lathes, swing two feet, sixteen and twelve inches; iron planer, 24x24x6 feet; one large and one four-spindle drill; emery jack and other tools; motor power and dynamo for lighting; immediate possession. John Rodger, Hamilton.

SITUATIONS VACANT.

MACHINE hand, one used to moulding machine, for cabinet factory; steady work for first-class man. Apply to The Burton Manufacturing Co., Limited, Hamilton, Ont.

MACHINIST for six-foot brake lathe—must be sober and steady; married man preferred; steady job for right man. State wages and experience. M. Beatty & Sons, Welland, Ont.

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Latest Cata-
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The Future of Gas Engines.

MUCH yet remains to be done in adapting the gas producers to use the cheaper kinds of fuel of a bituminous nature. Dr. Mond has built producers for this purpose, and he is to be congratulated on his daring in attacking a difficult problem on a large scale. The results to be obtained from his large central gas supply station in South Staffordshire will be watched with the utmost interest by all concerned in the combustion motor. Meantime, the use of gas installations for works of varying nature affords valuable experience in the production of gas for engines from bituminous fuel. With regard to vaporising devices for using petrol, petroleum, and other hydro-carbons, great progress has been made, and the advent of the motor-car has brought into the field a large number of able engineers entirely untrammelled by any considerations of precedent. Their efforts have resulted in extremely interesting constructions, which are highly successful in vaporising and applying these fuels to the use of the motors. Alcohol,

too, has been pressed into the service, and its properties, chemical and physical, supply a fresh series of problems for the chemist, the engineer, and the physicist. Remarkable results have been obtained in Germany by the use of alcohol. Professor Meyer's recent tests with alcohol engines prove astonishing efficiency to be obtained from this substance. It appears that alcohol mixtures are mixtures of very low inflammability, and, consequently, they can stand a very high compression. On account of this, on the usual principle of the engineer carrying his compression as high as he dares, heat efficiencies of 32 per cent. are stated to have been obtained by Professor Meyer. Coal gas was the first to be used for these motors, and it is still the most considerably used fuel. It seems possible now, in view of the incandescent gas lamp, to dispense almost entirely with the intrinsic illuminating power in coal gas; and if parliamentary sanction can be obtained to this step, a very cheap gas could be sold with a very high thermal value. A gas with a thermal value of 500 British thermal units per cubic

foot, sold at 1s. per 1,000 cubic feet, would enormously benefit towns' industries by providing them with cheaper motive power and cheaper means of heating. No doubt the problem presented can be solved by our chemists, the problem being to produce a gas combining in its properties the flame temperature required for the incandescent mantle and the heating value and low inflammability required for the successful operation of internal-combustion motors. One great development—perhaps the greatest of recent developments in connection with the internal combination motor—is the application of blast-furnace gas. This gas, so plentifully produced by our blast-furnaces, appears capable of supplying cheaply and continuously nearly three-quarters of a million horse power in Britain alone. The purification and utilization of this weak gas has presented another series of problems to the engineer, which he has successfully coped with. The internal combustion motor offers, perhaps, the best instance of international industry which could be imagined.—Kuhlow's German Trade Review.

Plumbers:

During the Plumbers' Convention next week, July 20, 21 and 22, we shall publish

A Daily Bulletin

giving notes of the Convention. It will be illustrated with cartoons of the prominent men of the Plumbers' Association.

Look for It!

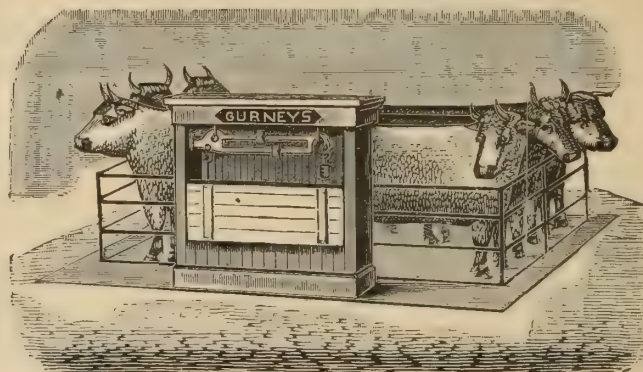
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ELECTRICAL GOODS AND SUPPLIES

The Engineering of Illumination.

AN excellent paper was read not long ago by Van Rensselaer Lansingh, before the Western Society of Engineers, which contained a good deal of new data on this subject. He states that there is, perhaps, no equally important branch of engineering to-day on which so little study has been given as that of scientific illumination. Its importance is so evident that this state of affairs is rather to be wondered at. It is safe to say that 25 per cent. of all the light used in this country is wasted, and in the majority of cases this waste, which would not be tolerated for a moment in any other department, can be saved by proper consideration of the exact requirements.

The question of illumination can be divided into three general classes: One, street and exterior lighting. Two, interior lighting. Three, Decorative and scenic lighting. The factors constituting good illumination are divided roughly into four classes—steadiness, effusion, quality, and distribution. Lack of steadiness is at once recognized by every one as undesirable, and modern sources of light are in this respect very good. There are cases, however, when constant flickering or the use of a reflector over an incandescent lamp, which is swinging, is objectionable and fatiguing to the eye, due to the bright streaks on the paper.

The first canon of good lighting is to place the illuminant out of the field of vision, or where this is impossible, to so shade it that its intensity is much reduced. The intensities in candle power per square inch of different lights are given: Candle, three to four; oil lamp, three to eight; mantle burner, twenty to twenty-five; acetylene, seventy-five to one hundred and twenty; enclosed arc, one hundred to two hundred; incandescent, one hundred to three hundred; nernst, eight hundred to one thousand; open arcs, ten thousand to one hundred thousand; sun on the horizon, two thousand, and sun in

zenith, one hundred and ninety thousand. The use of these bright artificial lights, without proper diffusion, has to a very large extent caused the increased use of glasses. The intensity alone is not the only criterion as regards the injurious effect on the eyes. The quantity of the

strongly emphasized upon, as this is the most important factor in having a subdued light, that is not only effective but is also easy and restful to the eye.

A New Line of Bronze Figures.

THE illustration shown on this page represents one of a handsome line of bronzes shown to our representative. For many years there has been a difficulty in obtaining a really first-class article in this line in Canada. Munderloh & Co. have been six or seven years developing this part of their business, and now it is safe to say that they are offering to the Canadian electrical public a splendid line of artistic bronzes which are infinitely superior to American, Austrian or German goods, and the prices, we understand, are remarkably low for the high grade quality of those displayed. They have asked us to call the attention of the hardware and metal trade to the fact that the month of August, or September, is about the beginning of the heavy Fall trade in this line, and in electrical fixtures, and it would be advisable to look through stocks now and write them, with a view to replenishing and obtaining new lines, so as to be prepared for business when it comes.

In addition to their electrical fixture branch, Munderloh & Co. have been busy during the Summer months preparing a large stock of electrical sockets, cut-outs, lamps, and general lines of supplies for the electrical trade, and will be pleased to quote on any of these lines.

Preston Electric Lighting.

On Monday, July 11, the ratepayers of Preston decided in favor of municipal ownership of the electric lighting plants. The by-law, which was to raise \$27,000 to purchase the existing incandescent plant, owned by Mr. Shearer, and the arc system, owned by Mr. Fenwick, carried by 170 to 15.

The recently organized board of trade did yeoman service in getting out the favorable vote. The municipality owned the street lamps and paid the rental on the dynamo that has been in use of late, consequently the change into municipal ownership has been gradual. A new power station will be erected and a first class plant will be installed.



light, that is the intensity multiplied by the area of the illuminant, is extremely important. The proper use of shades to diffuse the light is the point most



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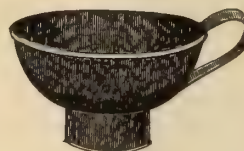
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Made in four sizes.

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New Advertisements:

James Steele, Guelph.

THE DUMPING CLAUSE.

A NUMBER of inquiries have been received from readers, asking us to explain the nature of the legislation known as the "dumping clause" in the recent tariff introduced by the Minister of Finance. There seems to be considerable difference of opinion throughout the country as to what it really means, caused mainly by the different views expressed in the daily newspapers. To begin with, the customs law of Canada now, and for many years past in force, provides, in effect, that the value for customs duty purposes of any imported article subject to an ad valorem duty shall be the fair market value of such article as sold for home consumption in the principal markets of the country of export, at the time of export, in the ordinary course of trade, and on the usual terms of credit. Heretofore, therefore, although any manufacturer or merchant might sell goods to Canada at lower prices than he sold similar goods for home consumption in

his own country, the Canadian importer was obliged to pay duty, not on the special price for export, but on the basis of the home consumption value in the country of export, as above referred to.

Briefly stated, Mr. Fielding has now provided that, in any case where imported dutiable goods of a class or kind manufactured in Canada, whether subject to a specific or ad valorem duties, are sold to Canada at a price below the fair market value of such goods, as sold for home consumption in the open market of the country of export in the usual and ordinary way, and on the ordinary credit terms, there shall be levied thereon in Canada, in addition to the ordinary duty established by the Canadian tariff, a special duty equal to the difference between the selling price and the said fair market value for home consumption in the country of export, provided, however, that such special duty shall not exceed one-half the ordinary duty provided by the tariff.

An exception, however, has been made in the case of the following articles:

Rolled round wire rods, not over three-eighths of an inch in diameter.

Pig iron, iron kentledge and cast scrap iron.

Iron and steel ingots, blooms, slabs, billets, puddled bars, loops and other forms, as described in Tariff Item 226.

Rolled iron or steel angles, tees, beams, channels, joists, girders, zebs, stars, other rolled shapes; trough, building or structural rolled sections or shapes and flat eye bar blanks, as described in Tariff Item 228.

Rolled iron or steel plates, not less than thirty inches wide, and not less than one-quarter of an inch in thickness.

As respects these articles, the special duty shall be the difference between the selling price and the fair market value for home consumption in the country of export, but not to exceed 15 per cent. ad valorem based upon the home consumption price. The reason for this exception is that the articles specifically mentioned are protected by way of bounty or bonus, in addition to duties. The rate of 15 per cent. ad valorem is estimated to represent one-half the protection afforded by such bounties and duties under the tariff. By this means the articles mentioned are placed on the same plane as all dutiable articles covered by the general provision.

It might be well here to illustrate the operation of the new law. Take, for

instance, the case of an article, say a piece of machinery, which is sold in the United States for home consumption there, in the ordinary course of trade, at \$100, and it is exported to Canada at a special price of, say, \$85. The article, let it be supposed, is dutiable at 30 per cent. ad valorem, under the Canadian customs tariff. The calculation, in these circumstances, would be as follows:

In the first place, duty would be charged at 30 per cent. ad valorem on the United States home consumption price, namely, \$100, making \$30 to be paid as the ordinary duty. The customs officer would then compute the special duty, on account of there being a difference between the selling price and the home consumption value. Such special duty would be the maximum, namely, one-half the ordinary duty, or \$15.

But supposing the article were sold to Canada at a price of \$95, the calculation in such case would be as follows:

Duty on \$100, at 30 per cent.	\$30 00
Special additional duty would be the difference between the selling price and the fair market value in the country of export, namely	5 00
Total duty	\$35 00

It will be observed from this explanation that the special duty works automatically. The home buyer and the foreign seller can determine whether any special duty will require to be paid or not, and if so, to what extent. If the selling price of the exporter to Canada is the same as the home consumption price in his own country, there is no special duty to pay, but if the selling price is lower than the said home consumption value, the special duty has to be paid, to the extent of the reduction. Provided, that it shall not exceed one-half of the ordinary duty, or 15 per cent. ad valorem in the specific cases we have referred to.

In effect, the amount of the reduction in price to importers in Canada is constituted a duty, and placed in the Government treasury, so that it is of no advantage to an importer to buy goods at slaughter prices.

On June 28, the "dumping" clause was amended by adding the following clause:

"The Minister of Customs may make such regulations as are deemed neces-

sary for carrying out the provisions of the foregoing sections, and for the enforcement thereof.

"Such regulations may also provide for the temporary exemption from special duty of any article or class of articles, when it is established to the satisfaction of the Minister of Customs that such articles are not made in Canada in substantial quantities, and offered for sale to all purchasers on equal terms."

The intention of the Government in introducing this clause was evidently to provide against lack of supply of Canadian manufactured articles, on account of strikes, or on account of articles being manufactured in Canada on an exceedingly small scale.

A SUCCESSFUL CAMPAIGN.

THE campaign we have waged for some years against the administration of the Department of Trade and Commerce has at last been successful.

Sir Richard Cartwright, the Minister, has never had a friendly feeling for the manufacturers. That he was not made Minister of Finance when the Laurier Government came into power was due to the Premier's desire to cultivate the business interests, which he feared Sir Richard would estrange, as he had in the Mackenzie Government. Both Sir Richard and his deputy showed no sympathy for the development of Canadian industry or an export trade. They opposed the appointment of commercial agents abroad, and discouraged them when they showed interest in their work, and a desire to do things. Two of these men were told by other members of the Cabinet to do their work as they thought best, and to pay no attention to Sir Richard or his deputy.

As our readers know, we have repeatedly drawn the attention of the Government and of the country to the weakness in this department, and urged that either Sir Richard should be given some other position and an energetic Minister put in his place, or that he should retain his present position and leave the details of the work to some bright young

man. At first he would not listen to either proposition.

The pressure, however, has been too strong. We are glad to report that some time ago Sir Richard was forced to carry out our suggestion, and placed the work in the hands of one of his staff, Mr. E. T. C. O'Hara. Mr. O'Hara has put intelligent energy into his work, with the result we anticipated—that the department is developing into a most useful adjunct to the Canadian commercial community. The announcement is now given out that Mr. O'Hara is confirmed in his appointment, and will practically have entire charge of the work of the Department of Trade and Commerce, though he will be known as superintendent of commercial agencies.

While the business community has opposed Sir Richard Cartwright bitterly in his management of this department, while they feel he has stood in the way of commercial progress, yet he is personally held in the highest respect because of the clean and honest record he has borne all through his parliamentary career. It is a well-known fact that he was a wealthy man when he first entered public life, while to-day he is not.

TECHNICAL BOOKS.

WE are gratified at the manner in which Hardware and Metal readers have adopted our suggestion regarding technical books.

All foundrymen, plumbers and tin-smiths in Canada should endeavor to equip themselves with the best information regarding the most modern practices in connection with their trade. To do this it is necessary to keep in touch with the standard technical books, those written by men who are acknowledged as authorities in the lines they are devoting attention to.

We have not found it an easy matter to secure the Canadian rights on some of the desirable books, but steady progress has been made towards that end, and we hope that in next week's issue we may be in a position to offer to the trade at least double the number of

standard works that we are now offering in an advertisement on another page.

If any of our readers would like to get any technical work not mentioned in our list of books, we will endeavor to secure it for them. All books will, of course, be sold at the publishers' prices, so that those ordering through Hardware and Metal can depend on getting them at the lowest possible prices.

RECIPROCITY IS IMPROBABLE.

THE last two sentences in the following, from the Iron Age, express tersely the truth about the prospects of reciprocity between Canada and the United States: "The manufacturing interests of Canada have attained such development that they feel entitled to their home trade. The policy of the Dominion Government appears to be in favor of thoroughly protecting domestic manufactures, even if it is necessary to go to extremes in that respect. Against such a policy we of the United States are not in a position to make any criticism or enter any protest. Our industries have been built up by the same methods. It would be of considerable advantage to us now if the Canadian Government should be willing to make a treaty for the free interchange of all the products of both countries. It is, of course, possible that some reason which does not now appear may influence Canada to favor such a step. Nevertheless it seems highly improbable."

HEATING AND PLUMBING NUMBER

NEXT week's issue of Hardware and Metal will combine the Annual Stove and Heating Number and the Annual Report of the National Master Plumbers' Convention. The additional reading matter and advertising will increase the size of the issue from 68 pages, as at present, to 112 pages (including covers.) The number will have a specially designed cover and will contain many illustrations of particular interest to those engaged in heating or plumbing, as well as to manufacturers of these lines.

This number will undoubtedly be the best ever issued in Canada devoted to heating and plumbing, and we would suggest to the trade that it be preserved as a work of reference. It will be an attractive number to keep in the office as a sample of trade literature.

Any reading matter or advertising for this issue should be in the office of publication by Tuesday next.

COMMERCIAL TRAVELERS' TAX.

FOLLOWING is a statement relative to the commercial travelers' tax charged in various countries, published by the Commercial Labor and Statistical Department of the Board of Trade, London, England:

ARGENTINE REPUBLIC.

Commercial travelers, whether selling goods in Argentina, or merely showing samples and soliciting orders, must secure licenses. The cost of these in the town of Buenos Ayres and the national territories, as distinct from the other provinces of the confederation, is \$50 currency (about £4 7s 6d) per annum. In the principal provinces the following license fees are levied on commercial travelers:

Jujuy, \$200 (about \$85, Canadian currency) per annum.

Salta, \$1,680 (about \$715, Canadian currency) per annum. Licenses are also issued for the half year in Salta.

Tucuman, \$400 to \$800 (from \$170 to \$340, Canadian currency) per annum, according to class of firm.

Cordoba, \$600 (about \$255, Canadian currency) per annum.

Santa Fe, \$600 (about \$255, Canadian currency) per annum.

Entre Rios, \$600 (about \$255, Canadian currency) per annum.

Corrientes, \$505 (about \$215, Canadian currency) per annum.

San Juan, \$960 (about \$408, Canadian currency) per annum. Monthly licenses are also issued in San Juan.

Mendoza, \$600 (about \$255, Canadian currency) per annum.

Santiago del Estero, \$500 (about \$213, Canadian currency) per annum.

Riga, \$100 (about \$42, Canadian currency) per annum.

Buenos Ayres, \$400 (about \$170, Canadian currency) per annum.

Samples without commercial value are passed by the Argentine customs without payment of import duty; samples of value are charged with import duty, which is refunded if they are re-exported within six months.

BELGIUM.

Reciprocal treatment is accorded to commercial travelers in Belgium, and consequently no restrictions are imposed on them, nor is any license duty charged.

Samples imported by foreign commercial travelers are admitted "en franchise temporaire," provided that certain conditions are complied with for the protection of the revenue. Samples too

small to be used for other purposes are duty free.

COLUMBIA.

No licenses are required by commercial travelers.

Samples in small pieces are admitted free of duty, provided that their total weight does not exceed 25 kilos. The import duty paid on other samples is returned if the samples are re-exported within a period of twelve months.

GERMANY.

Commercial travelers must, in order to carry on operations in Germany, obtain a license from the German authorities. Commercial travelers soliciting orders may only carry samples or patterns, and not the actual goods they offer.

Samples of goods which cannot be used for other purposes may be imported duty free into Germany. If doubt exists as to their utility for other purposes, the importer is allowed to render them unfit for use under official control. Samples of tobacco, foodstuffs and the like are excluded from free importation as samples.

GREECE.

Commercial travelers are not required to go through any formalities in order to be able legally to exercise their calling in Greece, nor are they required to take out any license, provided they come and go merely as bearers of samples and receivers of orders. Agents of foreign firms resident in Greece are, however, required to take out trade licenses.

Samples without commercial value are exempt from import duty. But when they have a value, as capable of being utilized in commerce in whole or in part, their delivery from the custom house shall be permitted under conditions of transit, after the identity of each sample has been assured by an additional mark affixed by the customs authority, and satisfactory security has been given for the payment of the import duty in the event of their not having been exported from the kingdom within twelve months in the same condition, whether from the same port, or from another port where importation is allowed.

ITALY.

In practice no certificates of identity or licenses are required from commercial travelers, the Italian Government enforcing the production of certificates only in the case of countries which have adopted restrictive measures against Italian commercial travelers.

Samples of no commercial value in-

tended to represent articles of which they form part, are exempt from duty. This exemption embraces also samples of paper and tapestry of sufficient size to show the whole pattern, as well as samples of porcelain, tissues, and other goods, comprising various patterns on one article, provided that the importer consents to render the same unfit for use.

JAPAN.

The business tax law of Japan imposed a tax on persons carrying on inter alia the businesses of agencies, middlemen and brokers. With regard to this tax it is found that merchants pay 5 yen* per 10,000 yen on wholesale transactions, and 15 yen per 10,000 yen on retail business done. They also pay 1 yen annually for each of their employes and 4 per cent. on their office rent.

In the case, however, of commercial travelers who do not sell their goods to customers direct, no special tax (beyond the ordinary income tax) appears to be payable.

Under the Japanese customs tariff law of March 26, 1897, articles temporarily imported as samples by commercial travelers are not subject to import duty, provided they are re-exported within six months of the date of importation; a sum of money equal to the amount of duty leviable, or security therefore, must, however, be deposited with the customs at the time of importation.

UNITED STATES.

Under federal laws no special regulations exist affecting commercial travelers, and the Supreme Court of the United States has declared in numerous cases that no state can impose a license tax for the privilege of selling goods which at the time of sale are not within its borders; so that no license can be required in any state from commercial travelers who merely carry samples and take orders.

Articles of no mercantile value imported as samples not for sale, are not subject to duty or to formal entry in the United States. Edgings, textile fabrics, samples of piece-goods, cards of buttons, single gloves or stockings intended for use in selling the class of goods they represent, are free of duty. Samples imported in quantities and intended to be sold by jobbers are dutiable. All samples must be examined by the appraiser, and only those reported by him as samples of no mercantile value are admitted duty free.

*1 yen—49.8 cents.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of **HARDWARE AND METAL**,
232 McGill Street,
Montreal, July 15, 1904.

RELAXATION in business due to the holiday season is generally more apparent at this time of the year than is the case at present. A fairly lively trade is being done in sorting up orders, which are coming in good numbers. Things are a little quieter this week than last, but not to any very great extent.

Prices in hardware staples remain firm on the whole, with little tendency to change. Another drop in cordage is reported this week, being a reduction of 1-2c a lb. on British manila and sisal rope.

A slight shortage in some sizes of screws occurred this week; otherwise stocks are in good shape.

Agricultural Wrenches—A splendid business is being done in agricultural wrenches at present. Advance in price noted last week still holds. We quote: 6 in., \$2.85 a dozen; 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

Wooden Handles—The volume of business has fallen off somewhat in this line. We quote maple and hickory handles of all kinds, discount 45 per cent.; ash hayfork handles, manure, spade and shovel handles and adze handles, discount 40 per cent.

Hay and Grain Scythes—The demand is fair, but somewhat lessened this week.

Grass Hooks—Not as many being sold as formerly.

Scythe Stones—These are moving well, and considerable demand is reported.

Wood Hay Rakes—The advance noted last week still holds. Few orders this week. We quote: Wood bow, straight, No. 1, \$3.40 a dozen; No. 2, \$3.10 a dozen; bent, No. 1, \$3.60 a dozen, list price. Discount, 40 per cent.

Garden Hose—There is no change in price since the advance last week. Business is fair.

Hose Reels—Little or no business being done in hose reels this week. Prices remain the same.

Lawn Sprinklers—Not much doing in this line. Prices as before, \$2.50 to \$18 a dozen.

Lawn Mowers—Business is still good in lawn mowers, and a good many orders are being received. We quote as follows: With 8 inch wheel, sizes 12, 14 and 16 inch, \$2.65 each; with 9 inch wheel, size 12, \$3; size 14, \$3.12 1-2; size 16, \$3.25 each; Philadelphia pattern, size 12, \$3.25; size 14, \$3.50; size 16, \$3.75 each; High Wheel, size 12, \$4; 14, \$4.25; 16, \$4.50; 18, \$4.75; 20, \$5.25 each.

Ice Cream Freezers—Brisk demand still keeps up. We quote the following range of prices for the leading brands: One quart, \$1.50 to \$1.60 each; 2 quart, \$1.70 to \$1.80 each; 3 quart, \$1.95 to \$2.25 each; 4 quart, \$2.35 to \$2.60 each; 6 quart, \$2.95 to \$3.25 each; 8 quart, \$3.70 to \$4.10 each; 10 quart, \$4.75 to \$5.50 each; 12 quart, \$5.75 to \$6.50 each; 14 quart, \$6.75 to \$7.50 each.

Washing Machines—Moving slightly better this week. We quote as follows: Round (three legs), \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Harvest Tools—Business in this line is pretty well over for the season. Discount as before, 60 per cent.

Hand Saws—Market is uniform, with fair demand. Discount, 10 per cent.

Spring Hinges—Scarcely any orders in this line have been received. We quote as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—Merely a nominal trade being done. Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Wire Coat and Hat Hooks—Business is well up to the mark. Prices continue 75c a gross for 3 inch.

Churns—Trade rather quiet. Discounts, 40 and 15 per cent., f. o. b.

Montreal, and 30 and 10 per cent., f. o. b. factory.

Green Wire Cloth—Hardly as active as it has been recently. We quote as before, \$1.50 per 100 square feet.

Poultry Netting—A slight falling off in orders. Discounts for 2 inch 19 gauge standard extras are 60 and 5; for 2 inch 16 gauge the discounts are 55 and 5 per cent.

Annealed Hay Wire—This is one of the most active lines at present. Prices and discounts the same.

Galvanized Poultry Netting Staples—A fair trade. Prices are: Sizes 5-8, 3-4, 1 1-8, 10 lb. boxes, \$12.50 list; 25 and 50 lb. boxes, \$12.25 list; 100 lb. boxes, \$12 list. Less 57 1-2 per cent.

Fence Staples—Market continues active. Prices as follows: \$3 per 100 lb. keg for galvanized and \$2.80 for bright; 25 to 50 lb. packages, 25c extra.

Barb Wire—A fairly good demand at present exists for barb wire. Prices continue the same. We quote: \$2.75 per 100 lb. f.o.b. Montreal, and \$2.50 f. o. b. Cleveland. Car lots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—Trade is dull just now. We quote as follows: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In car lots f.o.b. Cleveland, No 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than car lots 12 1-2c extra per 100 lbs. will be charged.

Rivets and Burrs—No change either in price or in general tone of business, which is fair. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

Screws—Another slight shortage reported this week. Demand still continues brisk. No change in price. We quote discounts as follows: Round head,

bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—A strong demand exists. We quote discounts as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Cut Nails—A good supply is maintained and an active business is being done. Prices continue steady. We quote as before, \$2.30 per keg f.o.b. Montreal, Hamilton, Toronto and St. John.

Wire Nails—Demand is quite brisk. We quote the following prices: \$2.40 per keg car lots, and \$2.45 per keg in small lots f. o. b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Pressed Spikes—A steady trade with no change in price. Discount, 25 per cent.

Horseshoes—Not as active as last week, but a fair trade doing. Our quotations are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—Business is good in horsenails. No changes in prices. We quote as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list; other brands, 55 per cent. off list.

Shotguns and Rifles—Fall business has commenced, and a good business is anticipated.

Ammunition—Business opening up well. No further change in price. We quote: Rim fire cartridges, 30 and 2 1-2 discount from list; centre fire, 5 per cent. advance on list.

Game Traps—No change in price this week. Inquiries coming in well. Discount, 70 per cent. off list.

Roofing Pitch—There is a brisk demand. Price continues \$1 a cwt.

Building Paper—A healthy demand continues, making it a good season for this line. We quote as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Firebrick—Trade is rather slow, and demand is slight.

Cement—July is generally a good month for the cement business, but trade is very slow just now. Prices remain unchanged at former quotations, which are: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex cars.

Cordage—Business can hardly be said to be brisk in the cordage business, but yet a fair trade is being done. A further reduction in price is noted this week. British manila and sisal rope have each been reduced 1-2c a pound. Quotations are as follows: British pure manila, 11 1-2c; pure manila, 14 1-2c; sisal, 10c; double lath yarn, 10c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord, 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

METALS.

The present is the time of the year of lightest demand in the iron and steel industries. Thus, a quietness prevails that is not altogether unexpected, and that does not indicate to any extent the future outlook of the market. Some lines indicate considerable activity. Pig iron is not particularly steady, and but little business is being done. Tin continues weak, with a decided upward tendency, while copper is firm and active. Lead also is firm, and in good demand. Prices remain unchanged, except a 1-4c reduction in scrap zinc.

Pig Iron—As remarked last week, a slightly better feeling pervades the pig iron market, but trade still continues dull, and there is little stock moving. No change in prices.

"Disc," No. 1.....	\$17.50 delivered Montreal
"Dom.," No. 1.....	18.50 "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 "
" No. 3.....	16.50 "
" No. 4.....	16.00 "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.50 "
Glengarnock.....	20.00 "
Gartsherrie.....	19.25 "
Carnbroe.....	18.50 "
Carron No. 1.....	19.00 "
" (special).....	17.50 "
Ayresome No. 1.....	17.50 "
" No. 3.....	16.90 "
Clarence No. 1.....	16.25 "
" No. 3.....	16.00 "

Bar Iron—Market continues strong, and a good demand is reported. Prices continue: Merchants' bar, \$1.75; horse-shoe iron, \$2; forged iron, \$1.95.

Merchant Steel—Slightly quieter this week, but moving fairly well. We quote: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.35; machinery (iron finish), \$2; square harrow, \$2.45.

Tool Steel—A fair trade in tool steel, with no new feature. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 9c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

Black Sheets—A brisk demand, much better than recently. We quote: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Galvanized Iron—The market is quiet and not particularly strong. No new quotations are reported. Prices are quoted as follows: Queen's Head, 28 gauge, \$4.30; 26 gauge, \$4.05; 22 to 24 gauge, \$3.80; 16 to 20 gauge, \$3.70; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.30. "Windmill Best," 28 gauge, \$4. In less than case lots, 25c extra.

Canada Plates—We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized, \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Sheet Zinc—Market steady at former figures. Cask lots are selling at \$6.25 to \$6.50. Small quantities, \$6.50 to \$6.75.

Zinc Spelter—Quoted at 6c, subject to concessions for quantities.

Tinplates—No change noted. Cokes, \$3.75, and charcoal, \$4.

Ingot Tin—Tin continues weak, but with an upward tendency. Last week's quotations still hold, but, as mentioned before, concessions are obtainable on large orders. Quotations are 30 to 30 1-2c.

Ingot Copper—Copper continues firm, and is quite active. The quotations of 13 1-2 to 13 3-4c are firmly maintained.

Pig Lead—Quoted at \$3.25 to \$3.35.

Coil Chain—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on carlots.

Scrap Metals and Old Materials—Hardly any stock is moving in these lines at present, as has been the feature for some time past. Dealers are exporting all their copper, as there is no demand in the home market. We quote: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL.

10 Front street east.

Toronto, July 15, 1904

BUSINESS continues to lessen in volume, and in a few weeks the hardware houses expect to be in the midst of the regular August holiday season. The inquiries for sporting goods, especially for guns and rifles, is more active. An advance is being made in rubber goods, owing to the higher cost of raw material. The advance is on a sliding scale, from a nominal rise in the coarser grades to an increase of about 10 per cent. in the finer qualities. Cotton twine and sashcord are from 2 to 5c lower, a result of reduction in raw cotton prices. Sisal and British pure manila are 1-2c lower. Competition on door track hangers continues decidedly keen.

Rubber Goods—The enhancement of values in raw rubber has resulted in an advance in all lines of rubber goods, the heaviest increase being about 10 per cent. in the finer lines, the coarser lines not showing so much advance.

Harvest Tools—A fairly steady demand continues, though the volume of trade is not as large as has been the case for some weeks.

Sporting Goods—The inquiries for sporting goods is materially larger, as retailers are starting to stock up for Fall business.

Washing Machines—A good business in this line has been done. Prices are as follows: Round reacting washer, per dozen, \$56; square,

reacting washer, per dozen, \$59; Eclipse, \$48; Dowsell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Woodenware—A fair business is reported. Prices are now as follows: Tubs, No. 0, \$11.55; No. 1, \$9.35; No. 2, \$8.25; No. 3, \$7.15; pails No. 1, 2 hoops, \$1.93; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 6 dozen packages (12 to case), 95c.

Steel Track Door Hangers—Retailers have, as a consequence of the concessions offered during the past few weeks, bought this line more freely than usual.

Chain—A good sorting business keeps up. Prices are as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Lawn Mowers—Demand for this line now quiet. Prices are unchanged, as follows: Woodyatt, 10 1-2 inch wheel, \$8.50; Star, 9 inch, \$7; Daisy, 8 inch, \$5.75; Philadelphia, 7 1-2 inch, \$7; Ontario, 7 1-2 inch, \$15.80; King Edward, 12 inch, \$9.50 (14 inch cut in above). D. Maxwell & Sons, 10 1-2 inch, \$7.50 to \$10; 9 inch, \$5.50 to \$6.25; 8 inch, \$4.90 to \$5.50. Discount 50 per cent.

Screen Doors—A fair trade is doing in this line. We quote as follows: Common, two or three panel, walnut, 4 inch, \$6.50; yellow and green stained, \$6.75; in natural colors oil finish, \$8.75, with 20c less for 3-inch style.

Screen Wire Cloth—Prices steady at \$1.50 per 100 ft.

Spring Hinges—There is a fair demand. Prices steady, as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Barb Wire—Sorting trade is still fair. Prices are steady. We quote as follows: \$2.75 per 100 lbs. f.o.b. Toronto and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—A fair trade continues at unchanged prices. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs. extra charged.

Coiled Spring Wire—Sorting orders are coming in from day to day. Prices are steady. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—A fair business is reported, with prices still steady. Quota-

tions are: \$2.45 per keg f.o.b. Toronto, with carlots \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

Horseshoes—Not much doing, with prices as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is still quiet. Prices are unchanged. We still quote discounts as follows: "C" brand, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—An active demand continues. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Business keeps brisk in all sizes, at steady prices. We quote as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—A moderate demand is reported from retailers. Prices are steady. We now quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Cordage—Sisal and pure manila rope is 1-2c lower. Cotton twine and sashcord are 2 to 5c lower, owing to reduction in raw cotton prices. We quote: Sisal, 10 1-4c; standard, 10 1-4c; standard manila (550 ft.), 11 1-4c; manila (600 ft.), 12 1-4c; pure manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are as follows: Pure manila, 14 1-2c; British pure manila, 12c; sisal, 11 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sashcord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5-32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 25c; 4 ply, 30c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Building Paper—There is a brisk demand for building paper, with prices firm, as quoted below. We quote: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing,

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

F. HYDE & CO.

WELLINGTON ST., MONTREAL

Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

"MIDLAND"

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Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Price to Sales Agents

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We invite inquiries for

Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

51 Hastings St. W., VANCOUVER, B.C.,

and LIVERPOOL, ENGLAND.

90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and L.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

Firebrick—There is a good demand for firebrick. Prices remain unchanged at former quotations, which are: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade, 32 1-2 to 40c.

Cement—Trade still continues good in the cement market this week, with prices unchanged. We quote the following: Canadian Portland, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2, ex-store; American Portland, \$2.30 to \$2.40 f.o.b. Toronto.

METALS.

A distinct improvement in the tone of the metal market is recorded this week. Copper and tin have advanced materially in the London market. Pig iron and bars, while unchanged in prices, are firmer in tone than for some weeks. The movement from stock and the imp- orders are more generous on all lines.

Pig Iron—Since the recent reduction in pig iron prices have been steadier in Canada. The improved tone of the United States market is, no doubt, a factor in this. Quotations are now unchanged, as below:

Middlesboro, f.o.b., Toronto	\$18 75
Hamilton, No 1	\$17 50 to 16 75
" No 2	17 00 to 17 25
" No 1, Hamilton	16 25 to 16 50
Midland, No 1	17 50 to 17 75
" No 2	17 00 to 17 25
" No 1 f.o.b. Midland	16 00 to 16 50
Radnor, f.o.b. furnaces	27 00
Londonderry, f.o.b. furnaces	16 50 to 17 00

Bar Iron—Prices are more firmly maintained than for some time. A good trade is reported. We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—Prices are steady, with an excellent trade doing. Quotations are as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—Prices are somewhat easier. Quotations are nominally unchanged, but some cutting is reported. We quote from 29 to 30c.

Galvanized Sheets—A fair trade is doing. Prices are not firmly maintained. Quotations are as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

IRON STEEL and METALS

Close prices to wholesale buyers only.

A. C. LESLIE & CO.

509-512 Merchants Bank Building,

MONTREAL.

McDOUGALL STANDARD PUMPS



stand the hard usage better than any other pump made, as they are composed of iron and steel, which wears much better than wood.

They are MADE IN CANADA, by Canadian mechanics, and you should handle them in preference to foreign makes.

Send for catalog.

The R. McDougall Co., Limited

GALT, ONTARIO.

"ALPHA"

HIGH SPEED STEEL

Crucible Cast Steel

for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

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Agents for Ontario:

BAINES & PECKOVER, Toronto

Agents for British Columbia:

E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

quantity of supplies in different parts of the province, has also assigned, this being necessitated by the low price obtainable for lumber. The depression in lumber is curtailing business both in Nova Scotia and New Brunswick.

* * *

The Intercolonial Coal Mining Co., Ltd., of Westville, is placing on the market fresh ground fire clay, which is claimed to be fully equal to the Scotch, but which is sold at prices considerably below the imported article.

* * *

At the beginning of the year W. B. Arthur & Co. announced that they intended to close out the retail branch of their business. It has taken them some time to get rid of their broken packages, but they have at last succeeded in doing so, and hereafter will carry on business "wholesale exclusively."

* * *

The only changes of prices of any consequence on the local market are the chop of one-half a cent in cordage, and an advance in handles of all kinds. Importers have received advices of an advance in window glass on the other side, but this will be offset by the lower duties now ruling. Turpentine is weaker, but the Halifax quotation is unchanged.

* * *

The strike at Sydney is a sore subject, of which the business community would very gladly hear the last. It still continues, however, and the purchasing power of the people of the entire district has become impaired. Under protection of the military, the works are being operated on a small scale, some four hundred men being employed.

* * *

The sales record of local wholesale houses for the first six months of the year have been slightly poorer than for the same period of 1903, but the profits have been more satisfactory. There has been more caution shown in the matter of credits, and the result is that there have been fewer losses from bad debts. Some houses say that if they had supplied all the goods required their sales would not have shown any falling off whatever. It is the intention to pursue the same careful policy in the future, and buyers who are not financially strong will likely experience some difficulty in getting their supplies during the next six months.

NEW EXECUTIVE OFFICES.

The Gutta Percha and Rubber Mfg. Co., Toronto, who recently purchased the Royal Insurance Building, corner of Yonge and Wellington streets, Toronto, are tearing out the interior of that building, the intention being to remodel the same for a modern sample room and executive offices. The building, when completed, will be one of the most up-to-date in Toronto.

THE BRANDING OF NAILS.

CONSIDERABLE interest has been expressed by the trade in the letter on the above subject by H. & J. Young, of Quebec, in last week's issue of Hardware and Metal.

Mr. Dobbie, of Brockville, in referring to the matter, said: "In wire nails the modern terms 1 inch, 2 inch, etc., are used, and there is no possible reason why the old descriptions should be used on cut nails. Of course, the old terms are not a serious inconvenience, but the fact that they are out-of-date should be sufficient to induce the manufacturers to size them according to the better terms."

D. Drysdale, Montreal, concurred in the spirit of the letter in last week's issue. "While the present method of branding nails," said he, "causes no personal inconvenience to one long in the business, it is annoying to apprentices and to the public. The names, 8dy, 10dy, etc., may have been all right thirty-five or forty years ago, but today they are not only antiquated, but incorrect. In the case of 10dy nails it meant that 1,000 of that size weighed ten pounds, and so on, for other sizes, which does not hold now with machine-made nails. I have often thought of the matter, and think a change would be a good thing."

James Walker, of Montreal, in speaking of the subject, said: "I approve of making a change from the method of branding nails now in use. Why not go a step further than was suggested by Messrs. Young's letter, and apply the same reform to tacks? For instance, the expression 6, 8 and 10 oz. tacks means nothing to the general public, when called by that name, and brings in no idea of size. I think it would be a good idea if they were expressed in units of length, the same as moulding nails."

PERSONAL MENTION.

Mr. Edward Cavanagh, of the E. Cavanagh Co., Montreal, has been ill for some time, and unable to attend to business.

Mr. J. R. Wells, of the Fairbanks Co., Montreal, left this week for Boston, where he will join a party for St. Louis and the West.

Messrs. Green and Cogan, of the printing and advertising department of the Sherwin-Williams Co., Cleveland, O., visited Toronto on a holiday trip last week.

Conrad Leisemer, hardware dealer, Mildmay, Ont., is building a large brick store on the site of an old store, which has been moved temporarily on to the street to make room for the new structure.

Mr. J. A. Burns, of Munderloh & Co., has just returned from a two



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Steel Shingles

either Galvanized or Painted

Are Always They are more economically durable and
Reliable quicker to apply than any others, fitting accurately—and therefore most easily laid.

They have been thoroughly tested in all kinds of climates, invariably proving **Fire, Lightning, Rust and Weather Proof.**

If you're building, make sure of satisfaction by ordering **EASTLAKE'S** for the roof—fullest information if you write.

Metallic Roofing Co., Limited,
WHOLESALE MFRS., TORONTO, CANADA.

months' trip through France and Germany, where he has been in the interests of the firm, looking up the latest in electrical goods, manufactured in these countries.

Mr. Alex. Gartshore, of the Gartshore-Thomson Pipe & Foundry Co., Ltd., Hamilton, died at his home in that city on Wednesday, after an illness of about one month. Deceased was a brother of Col. Gartshore, of the McClary Mfg. Co., London.

W. Gordon Grant, Johannesburg, a distinguished South African engineer, is at present visiting Canada and the United States. He called immediately on his arrival at the office of Hardware and Metal to get information as to engineering and other plants in Canada. He visited a number of establishments in Montreal and in Ontario, and spent some time studying the development of the work at Niagara Falls, and is now in the West.

C. M. Irwin, hardware merchant, Arthur, Ont., who has been confined to his bed for several months past, is, we are pleased to learn, regaining his health. Mr. Irwin has been in the hardware business at Arthur since 1885, and during those years has built up a good substantial business. He intends retiring from business and wishes to sell his stock and business and rent the store. The stock, which is valued at about \$2,000, is good and well assorted, and the business is in first-class shape, not having been allowed to deteriorate during Mr. Irwin's illness.

The Metal Shingle and Roofing Co., Preston, Ont., were burned out Friday morning, loss \$40,000.

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special Correspondence of **HARDWARE AND METAL.**

Vancouver, B. C., July 8, 1904.

THERE has been so much cement used in Vancouver during this season that the supply, which is usually brought direct from England, has not been sufficient. Building operations are very extensive and are continuing so, and ten or twelve miles of cement pavement for sidewalks in the residential portion are being laid. All this has used so much cement that importations have been made from San Francisco, and the steamer Queen on her last trip brought up 100 tons. This will tide over until a sailing ship arrives from England.

The 25 per cent. rise in American ammunition will have considerable effect here, especially if it is maintained for a month or two later. There are always a number of hunting parties, besides prospectors and others requiring ammunition, outfitting here, and any increase in prices will be felt.

Local trade, which is good, will be benefited by the commencement of operations by the A. J. Burton Saw Co., which expects to begin in two or three weeks. When it is considered that saw mills have to import all their materials, paying a 30 per cent. duty, and have even to send to Seattle for any repairs needed, there should be good business for an institution of this kind. The company has placed an order for 800 gallons of whale oil with a firm in Montreal, and expect delivery before August 1. This oil is used in tempering. One of the important facts in connection with the operations is that steel can be laid down as cheaply in Vancouver as in Toronto, by the Jessop Steel Co., of Sheffield, England. The product of this firm is considered to be the best in the world for saw purposes, and is used almost exclusively by the manufacturers in the United States.

There promises to be a good trade with Mexico as soon as the line of steamers is on the route, and a start is made. Mr. Frank Turner, who has lived on the coast, but who has been spending a year in Mexico, tells what articles might be exchanged. Coal is needed for smelting purposes, and in that product British Columbia can supply any quantity. The principal goods are rough lumber, coal coke, canned salmon, condensed milk, agricultural, mining and all kinds of machinery, wagons and buggies. These could be shipped in large quantities. Goods that could be shipped with profit on a small-

er scale are: cheap grades of flour, dynamite (until Mexican dynamite concession is organized), nails, shoes (special makes for the wealthier classes), cotton, clothing (cheap), coarse paper of all kinds, cyanide of potassium, Canadian Club whisky, and canned meats. Canadian Club whisky is so popular down there that it is in every saloon.

All kinds of returns, such as customs, inland revenue and shipping, for the fiscal year just ended, show satisfactory increases as far as Vancouver is concerned. In inland revenue there was an increase of over \$40,000, and in customs the figures were \$146,155.08. This latter is considered very large, especially as there was no Chinese immigration during the last six months, an asset which netted over \$100,000 during the first six months of 1903.

In shipping, there were 452 ships outward during the year, taking 133,604 tons weight of freight, and 139,957 tons measurement of freight; inward, 507 vessels, bringing 108,538 tons weight. Seagoing vessels in ballast to the number of 271 entered the port, and outwards 329. Coastwise, during the year, 3,442 vessels entered the port, and outwards 3,462 vessels.

Considerable machinery went out on the Empress of China, which departed for the Orient on Monday last. The blue funnel liner Stentor, one of the boats which call once a month, is expected here next week with 1,000 tons of cargo for merchants in Vancouver. She will have 500 tons to discharge at Victoria. Part of her outward cargo will be lumber from here for the Orient and the United Kingdom.

Another lumber shipment of a million and a half feet is on the British sailer, County of Kinross, which got away this week, having waited a few days for a tug. She is bound for Havre and Calais. The British ship Hawthornbank is chartered to load lumber at the Hastings mill, and will be in port this week.

One of the large shipments of cargo to Dawson, via St. Michael and the Lower Yukon, will be made next week. The steamer Melville Dollar, of the Empire Transportation Co.'s fleet, will be in port on Sunday, and about 1,000 tons of general merchandise is here waiting her. The Northern Commercial Co. is the shipper. This will be the second boat to load for St. Michael from this port this Spring, the other having been the Olympia, of the Northwestern Steamship Co.

Low water in the Yukon River is still impeding traffic between White Horse and Dawson. There have been gradual rises of late, but not sufficient to allow the boats on the river to take full loads. With the increase of shipments after the 1st of July, consequent upon the lower freight rate schedule, there will be large amounts of freight to get away from White Horse, and to avoid congestion there will be little time to lose. The cool weather though, is favoring the

miners, who will have a more protracted season of washing.

A Vancouver man, backed by English capital, is going to raise Angora goats in the Okanagan District, for the production of mohair, used in the manufacture of textile fabrics. It is an experiment that will be watched with interest.

Vancouver and Victoria expect to have connection by telephone by October. The cable to be laid is now being manufactured at Heney's, London.

The Victoria Machinery Depot has been successful in being awarded the contract for repairs to the 7,000-ton steamship Algao, which tore out a huge section of her bottom on Point Bonita recently. This was a big plum, and all the firms on the coast were in the running. It will mean a cost of \$100,000, and besides \$10,000 improvements to her machinery are to be put in.

The Imperial Coal and Coke Co. have acquired control of the Alberta Coal and Coke Co., securing 650,000 out of the 1,000,000 shares. The latter company owns 6,400 acres of land on the Crow's Nest Pass line, four miles west of Cowley, Alberta. The Imperial Co. owns 90 sections of land six miles from Michel, in British Columbia. The Imperial is a strong company made up of Toronto, Montreal and New York people.

One thousand tons of stone were shipped last week from the quarry on Newcastle Island, in the Gulf of Georgia, to San Francisco, to be used for building purposes.

The Waterous Engine Works have supplied many new mills with plants this year, among the number being the Arrowhead Lumber Co., Big Bend Lumber Co., Revelstoke Lumber Co., Okanagan Lumber Co., and the East Kootenay Lumber Co.

Two of the heaviest engines for logging purposes have been shipped from Victoria for use in the Nitinat Lake District, where the timber is very heavy.

J. D. McBride, of Cranbrook, has just completed improvements to his store, which will make his hardware house one of the largest in the interior.

The management of the B. C. Marine Railway Co. have taken over the Albion Iron Works for a couple of months, to run off some very heavy castings. Negotiations are pending for a sale of the works.

Several big contracts for coal for delivery during the next few months have been secured by the Wellington Colliery Co., which will revive the industry here. Contracts held by the Washington collieries had expired, and owing to the poor quality of their output their tender could not be accepted for renewal. Nanaimo collieries, owing to the big fire recently, and the delay in opening the Departure Bay mine, were unable to compete. The securing of the contracts will mean the Wellington going at once into commission, and the Wyefield coming back on the run.

Complete lead products will now be manufactured by the Canadian Smelting Works at Trail, B. C., and the expense of plant will be \$100,000. The machinery is now at the smelter to manufacture lead pipe, and sheet lead will also be among the products. The company expects to be in the market with lead pipe in 30 days.

PITTSBURG METAL MARKETS.

From The Iron Trade Review, July 14, 1904

AS anticipated, prevailing prices were reaffirmed at the various steel association meetings held in New York last week. Meetings of the billet, rail, plate, structural and bar associations were held, and after prices were reaffirmed by the billet manufacturers, similar action was taken all along the line. As a result of the billet meeting there will be less cutting in the trade than there has been in the past, several interests that led in making low prices having agreed to maintain quotations in the future. However, a number of independent manufacturers are still outside of the association and quotations from \$1.50 to \$2 below reaffirmed prices continue to be made. It was also decided to appoint a committee to investigate charges of cutting, several of the other associations already having such committees. It is thought doubtful now if lower prices on billets by association mills will prevail the remainder of the year. An improvement in the iron and steel trade is looked for in the Fall, which was thought sufficient to warrant a maintenance of prevailing quotations. The sentimental effect of the action taken last week has been good on the trade in general, although very little actual improvement in any lines can be noted.

Pig Iron—While a half dozen merchant furnaces in the Valleys are preparing to go out of blast, the idle list referred to in these columns last week has not been increased. Stocks are being worked up at all of the plants and sufficient tonnage is being accumulated to tide the furnaces over their periods of idleness. The furnace operators are resisting all efforts to bring about further reductions, contending that at present prices they are merely trading dollar for dollar, and do not wish to operate at a loss.

Relatively the lowest price for iron now prevailing is on forge, which nets the seller from \$11.15 to \$11.25 at furnace, and while \$11.40 was done on Bessemer several days ago on a 4,000 ton lot, few furnaces will go below \$11.75, while others are holding out for \$12 in the Valley. With ore and coke at their low points, it is pretty generally conceded that the Valley furnaces cannot possibly sell iron any lower than present prices, and none of the operators will accept present quotations on contracts extending through the remainder of the year. The Southern mar-

ket remains firm, No. 2 foundry being at \$9 Birmingham as a minimum, and it is doubtful if \$8 could be done on forge. Owing to the low prices that are being named by northern producers, southern iron cannot compete in this market at present. We revise quotations as follows:

Bessemer, Valley	\$11 60 to	\$11 75
Bessemer, Pittsburg	12 45 to	12 60
No. 1 Foundry	12 75 to	13 00
No. 2 Foundry	12 35 to	12 60
Gray forge, Pittsburg	12 00 to	12 15
Chilled basic, Valley	11 40 to	11 50
Chilled basic, Pittsburg	12 25 to	12 35

Steel—A number of interests heretofore outside of the billet association agreed at the meeting last week to maintain prices in the future, and a firmer market is expected. This does not mean, however, that concessions will not be made, as steel continues to offered by other interests at from \$1.50 to \$2 below association prices. The following quotations were reaffirmed: Bessemer and open-hearth billets, 4x4 inches, and slabs up to and including 0.25 carbon, \$23 Pittsburg, Wheeling, Valley, Johnstown, Ashland, Ky.; Ironton, O.; and Lorain, O.; 0.26 and including 0.60 carbon, \$1 advance; and 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 3 7-8 inches and sheets and tin bars are \$1 per ton extra. Bessemer and open-hearth rods are quoted at \$28 to \$28.50 Pittsburg.

Bars—Quotations on steel bars were again reaffirmed at the meeting of the manufacturers held last week. On iron bars 1.30c, Pittsburg, is being shaded in small lots. The Pressed Steel Car Co. is expected in the market shortly for about 8,000 tons of iron bars, while the Pennsylvania Railroad has not done any buying for two months and is expected in the market shortly. Prices have been reaffirmed as follows: Bar iron, 1.25c to 1.30c Pittsburg for local delivery, while for western shipments quotations are based on 1.25c to 1.35c Pittsburg. Hoops are held at 1.55c base, and bands at 1.35c, taking bar extras. Bessemer steel bars, 1.35c; open-hearth, 1.40c; plow beams and cultivator beams, 1.35c net; channels, angles, zees and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel. Less than 2,000 pounds of a size, not less than 1,000 pounds, 10c advance; less than 1,000 pounds of a size, 30c advance.

Sheets—Producers are resisting efforts of large consumers to shade 2.10c on 28 gauge, and several offers of desirable tonnages have been turned down by several mills which were offered at 2.05c. Few of the mills can operate at a profit on the 2.10c basis, owing to the high price of sheet bars and all business at lower prices is now being pretty generally refused by the mills. This week the Youngstown Iron Sheet

& Tube Co. resumed operations, and other independent sheet mills are signing the amalgamated association continuous scale. The independents are therefore not taking the stand against the association expected, when they disagree with the scale committee. We make the following quotations: Black sheets, one pass, in earloads, No. 8, 1.60c; No. 9, 1.65c; Nos. 12 to 14, 1.70c; Nos. 15-17, 1.75c to 1.80c; Nos. 18-21, 1.85c to 1.90c; Nos. 22-24, 1.95c; Nos. 25-26, 2c; No. 27, 2.05c; No. 28, 2.10c to 2.15c; No. 29, 2.35c to 2.40c; No. 30, 2.50c to 2.55c. Galvanized: Nos. 12-17, 2.20c to 2.25c; Nos. 18-21, 2.35c to 2.40c; Nos. 22-24, 2.50c to 2.55c; Nos. 25-26, 2.65c to 2.70c; No. 27, 2.90c; No. 28, 3.10c; No. 29, 3.45c to 3.50c; No. 30, 3.85c to 3.90c.

Wire and Wire Nails—The market continues quiet, and mills pretty generally are shut down. Concessions of \$2 per ton are reported from the west and south, but consumers in this immediate district cannot secure concessions of more than \$1 a ton. We make the following quotations: Wire nails, earload lots to jobbers f.o.b. cars, Pittsburg, are quoted \$1.90 base; plain wire, earload lots, \$1.80 base; barb wire, earload lots, \$2.20 base; staples, earload lots \$2.05 keg Galvanized, 30c extra. Earload



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A SAMPLE ORDER SOLICITED

Powder, F.F., keg	4 70
F.F.G.	5 00
Tinware, pressed, retinned.	70 and 10 p.c.
" plain.	75 and 2½ p.c.
" pieced.	
Japanned ware	37½ p.c.
Enamelled ware, white.	45 p.c.
" Famous.	50 and 10 p.c.
" Imperial.	50 and 10 p.c.
Green Wire Cloth.	1 55

PETROLEUM.

Water white American	27½c.
Prime white American.	25½c.
Water white Canadian.	25½c.
Prime white Canadian.	24½c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap.	5
Copper (heavy)	8½c. per lb.
Yellow brass (heavy)	7½c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead.	2c. to 2½c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead.	\$6 00 to \$6 50
Putty in bladder, 2½ lb., in keg of 100 lbs.	0 02½
Turpentine, pure, in barrels.	\$ 0 87
Less than barrel lots.	0 92
Linseed oil, raw.	0 52
Boiled	0 55

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.	
Lubricating oils, heavy castor machine.	0 29
" extra engine.	0 27
" dynamo.	0 35
" black.	0 22
" cylinder.	\$0 50 to 0 75
(as to quality)	
Harness oil.	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure.	1 00½
" 2nd pressure.	1 09½

LONDON METAL MARKET.

From The Metal Market Report July 6.

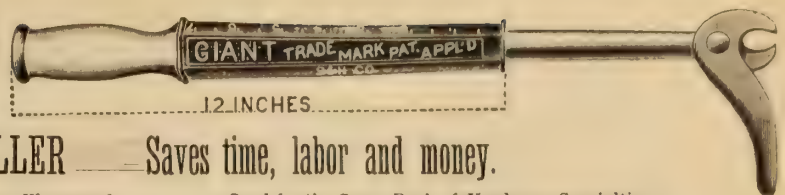
Pig Iron—Scotch warrants, Glasgow, closed at 51s 9d, unchanged. Middlesboro No. 3 foundry at 42s 9d, unchanged from last week.

Tin—Spot tin opened firm at £119 5s, futures £119 10s, and after sales of 160 tons of spot and 250 tons of futures closed firm at £119 15s for spot and £120 for futures, making price as compared with last week £2 15s higher on spot and £2 18s higher on futures.

Copper—Spot copper opened firm at £57 6s 3d, futures £57 3s 9d, and after sales of 25 tons of spot and 100 tons of futures closed quiet at £57 5s for spot and £57 2s 6d for futures, making price as compared with last week unchanged on spot and 6d higher on futures.

Lead—The market closed at £11 12s 6d, making price as compared with last week 1s 3d lower.

Spelter—The market closed at £22, making price as compared with a week ago unchanged.

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ALLEN C. JENKING, Canadian Manager.

GLAZIERS' DIAMONDS

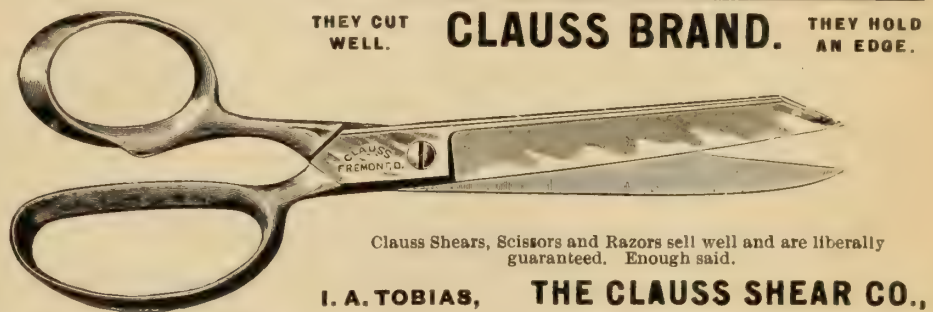


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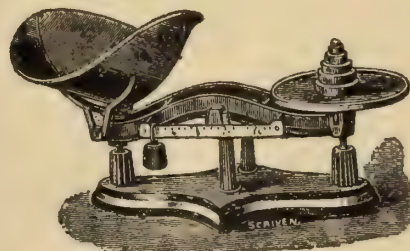
Canadian Agent

GODFREY S. PELTON

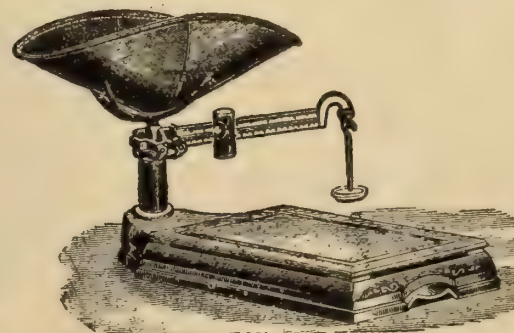
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WELL.THEY HOLD
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Made for 27 years in the *largest and best-equipped scale factory* in the Dominion of Canada. Have you seen our latest No. 60 (100 page) Catalogue of *Imperial Standard Scales*?

Write for prices and details.



MERRICK, ANDERSON & CO., NORTH-WEST DISTRIBUTORS, WINNIPEG.

PAINT, OIL AND BRUSH TRADES

ANTI-LEAD LEGISLATION.

A BILL has been introduced in the Chamber of Deputies of Belgium, the purpose of which is to restrict the use of white lead. Its provisions are as follows: (1) The use of white lead is forbidden in workshops, building yards, and on constructions and in all other places where constructions are painted. (2) The use of lead pigments other than white lead may be forbidden, in whole or in part, by Ministerial decree on the motion of the Council of Hygiene in all works included in the first clause. (3) Employers or foremen who infringe this law will be subject to a fine of from 25 to 50 francs. The fine will be imposed as often as a breach of the law is proved, without the total exceeding 500 francs. In case of a second offence (recidive) the fine will be increased to from 50 to 500 francs, without exceeding a total of 2,500 francs. (4) This law will come into force one year after its promulgation.

The first clause is obviously intended to restrict the use of white lead to artistic painting, strictly so called, as distinct from protective or decorative painting. If the bill is carried, it will, of course, be superfluous to legislate with reference to the grinding and other preparation of white lead, as all branches of the white lead industry, and probably of the lead pigment trade as a whole, would be annihilated so far as Belgium is concerned.

The Proper Handling of Varnish.

FINE varnish is easily affected by cold and changes of weather. The rule is, a cool place in Summer, and a warm place in Winter, and an even temperature of about 70 degrees all the time. Much of the trouble from varnish comes from not observing these simple rules. It is a good rule, also, in cool and cold weather, to do the varnishing in the morning, so that it will

have the benefit of the day's drying, and escape the cooler and less favorable action of the night air. Still another important matter is to have the varnish and work of the same temperature when applying the varnish. To effect this, have the varnish in the room long enough beforehand to reach the temperature of the work. When varnish is cooler than the surface to which it is applied it works very hard, and to secure an even coat is almost, if not quite an impossibility.

It is sometimes difficult to keep varnish at an even, warm temperature in Winter. This is especially true of

small shops. But the can of varnish may be warmed before using, and this is readily done by setting the can near the stove, care being observed not to let it get too hot for fear of explosion or ignition. It is likewise a good plan to warm the cup before pouring varnish into it, and if the varnish is still too cool set the cup on the stove until sufficiently warm. Stir the varnish while it is warming in the cup. Should it get too hot, pour part of it back into the can, and pour out more from the can, stirring again. Varnish is very combustible, of course, and there is always danger when having it around a fire. Be careful, therefore, unless you are fit to die and your shop is insured for more than its value.

Refined Gas Tar,
Coal Tar,
Roofing and Paving
Pitch.



Lowest Prices.

The Imperial Varnish & Color Co.

LIMITED,

TORONTO, ONTARIO, CANADA.



WAGNER'S CARRIAGE PAINTS...

We are the only people manufacturing, or who have ever manufactured, this line. The line has been so good that many imitations are offered—every one of which is but a tribute of praise to the original.

Wagner's Carriage Paints are standard for quality and general excellence.

PUT UP IN QUARTS, PINTS, AND HALF-PINTS.

SEND FOR QUOTATIONS.

STANDARD PAINT & VARNISH CO., Limited WINDSOR, ONTARIO.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street.

A trial order will prove to you that there is nothing better than

SOLARINE Metal Polish

Sells wherever introduced.
Only try it and convince yourself.
For Ontario, address:

HENRY F. FALKNER, 60 George St., Toronto

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

ABOUT GLUES

What kinds do you handle? Are you and your customers satisfied? Perhaps we can give you a better article at a fairer figure. Our SCOTCH GLUES will be found of exceptional strength, and equal to many glues for which much higher prices are charged. Let us send samples.

GROVE CHEMICAL CO. Ltd., Appley Bridge, Lancashire, Eng.

Do you use a

Roller Awning?

If not, why not? We make the best roller awning in Canada. We can operate a 60-foot awning on one roller from one end easily and safely. Write or call for particulars. The best is none too good for you.



WM. BARTLETT & SON
Tents, Awnings and Flags

16 Adelaide St. West,

TORONTO.

TRADE



MARK

Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works or from the principal Color Dealers in Canada



Profit Bringers

Our "Island City" Aluminum Gold and Silver Paints can be used with great satisfaction on Furnaces, Radiators, and all sorts of Furniture and Ornaments that require renovating.

P. D. DODS & CO., Montreal, Toronto, Vancouver

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, July 17, 1904.

SINCE last week little change is noted in the tone of the paint and oil market. Trade continues brisk in all lines, travelers sending in good orders, as well as those received by mail.

Weakness in linseed oil in United States has no effect on the market in Canada. In England the price has been steadily advancing, and it is from that source that the Canadian market is directly influenced. A local rise of 1c a gallon is the outcome, being warranted by the British advance. Turpentine is steady, with an upward tendency. Paris green also continues steady, and in good demand. Beyond the advance in linseed oil, no further change in prices has taken place. We quote:

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

Putty—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 81 1-2c per gallon; two to four barrels, 80 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

Linseed Oil—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in On-

tario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c; 25 lb. drums, 15 1-4c; 1 lb. packages, 16c; 1-2 lb. packages, 18c; 1 lb. tins, 17c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street, East.
Toronto, July 15, 1904.

BUSINESS in mixed paints, varnishes, dry colors, sundries, etc., is not quite as active as it has been for some weeks. The movement of Paris green keeps up well, and a fairly

good demand for turpentine and linseed oil is reported. The advance in linseed oil, anticipated in last week's issue, was made by practically all the paint houses early this week. Turpentine quotations are reduced by some houses. In other lines there is no change.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls., 46c; boiled, 49c; 5 to 9 bbls., raw, 45c; boiled, 48c, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points. Another quotation is: Raw, 1 to 4 bbls., 46c; boiled, 49c; 5 to 9 bbls., 45c; boiled, 48c; 10

NO CHANCES TAKEN.

You do not run a risk or take a chance when you secure the agency of a ready mixed paint made with the best white lead the world produces—**BRANDAM'S B. B. GENUINE.**

The only two brands manufactured in Canada that contain this white lead are

ANCHOR AND ENGLISH.



TRADE MARK

When you handle either you have a sure thing. A paint that will bring repeat orders to your store.

Send us a post card
and let us tell you
all about them.



HENDERSON & POTTS, Limited, Halifax
HENDERSON & POTTS, CO., Limited, Montreal

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.



GILLETT'S LYE

—IS GOOD FOR—

Softening Water.

Fill a coal oil or vinegar barrel with water and add three or four teaspoonfuls of Gillett's Lye. Best to prepare the water one day before wash day. Water so prepared won't injure the finest clothes, or the hands.

Sell Gillett's Lye for Softening Water

E. W. GILLETT COMPANY LIMITED
TORONTO

STERLING PAINTS ..

A weatherable paint for outside—
a washable paint for indoors.
Cover the house.

Put up in handy tins, beginning with half-pints.
Every dealer should handle "STERLING" Paints—The paint that wears well.



CANADIAN OIL COMPANY, Limited

T. H. HAMILTON, Manager.

Scott and Front Sts., Toronto.

BRIDGE
GIRDER
PAINT

ONLY THE BEST MATERIALS

THE CANADA PAINT CO. LTD.
MONTREAL AND TORONTO.

THE CANADA PAINT CO. LTD.
MONTREAL AND TORONTO

CAR
ROOF
BRIDGE
STATION
PAINT
VARNISH
FOR ALL
PURPOSES

barrels and over open, ex-Toronto, 2 per cent. off 30 days.

Turpentine—Single bbls., 81c; 2 to 4 bbls., 80c; 5 bbls. and over, f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

English Paris Green—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

Window Glass.

TORONTO.

Much cutting is reported, but prices are nominally unchanged. A fair trade is doing. We quote nominally as follows: Star, first break, at \$3.30 per 100 feet, and Double Diamond, first break, at \$5.10. Discount, 15 and 20 per cent.

Crude Petroleum Lower.

The Standard Oil Company has announced another cut in crude petroleum amounting to two cents. This action follows Tuesday's decline of ten points in the price of refined. The lower values are due to the increased production. Since July 19 refined has declined 25 points and crude 7 points.

Pittsburg, Pa., July 13.—The Standard Oil Company announced a further cut to-day in prices of crude petroleum. The quotations follow: Pennsylvania, \$1.50; Tiona, \$1.65; Corning, \$1.30; Newcastle, \$1.37; North Lima, \$1; South Lima, 95c; Indiana, 95c; Somerset, 95c; Ragland, 58c.—New York Journal of Commerce.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1.000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " 1 year.....	17 00
" " 6 months.....	10 00
25 " " 1 year.....	10 00

SITUATIONS VACANT.

YOUNG man between 25 and 30 years of age, with several years' experience in the hardware business. Good salary to good man. Apply, stating wages and experience, to "Hardware," Box 498, Kamloops, B.C. (29)

WANTED—For Manitoba—Experienced tinsmith; knowledge furnace work necessary. Apply, with references, to Merrick, Anderson & Co., Winnipeg. (31)

SITUATIONS WANTED.

MANAGER, traveller or assistant—thorough knowledge hardware, paints and colors; 20 years' experience; thoroughly energetic; very smart salesman; total abstainer; age 35; highest credentials. "Dominion," HARDWARE AND METAL, Montreal. (31)

MANAGER, thorough knowledge hardware; 20 years' varied experience; used to organization and administration of a large corporation; undoubted ability; total abstainer; age 35. "Independence," HARDWARE AND METAL, Montreal. (31)

BUSINESS CHANCES.

HARDWARE business wanted in live city or first-class town of not less than five thousand population, located in good farming community. Apply Box 146, HARDWARE AND METAL, Toronto. (25tf)

RETAIL hardware business for sale; one of the largest and in best location in Toronto; largely cash business; in good running order; turnover for 1903 over \$35,000; can easily be increased to \$50,000; stock and tools about \$9,000. For particulars and terms address Box 152, HARDWARE AND METAL, Toronto, Ont. (28tf)

SMALL, clean stock of hardware, with store fixtures, consisting of glass, shelf and heavy hardware, paints, oils, cutlery; splendid chance for person opening up business; stock about twenty-five hundred to three thousand, at rate on the dollar. Must be sold by 28th inst. Will be packed ready for shipment. Box 156, HARDWARE AND METAL, Toronto. (30)

FOR SALE.

FOR SALE—\$1,600 stock of hardware, stoves and tinware, including set of tinsmith's tools; situated in first-class agricultural district in Central Ontario; will sell at a close figure. Apply Box 151, HARDWARE AND METAL, Toronto. (29)

STAMPED ENAMELED HOLLOW WARE

THE largest buyer in Europe desires to place his services at the disposal of the principal buyers in Canada; commission terms; 20 years devoted exclusively to these goods; unrivalled knowledge; unique experience. Apply Box 67, HARDWARE AND METAL, Montreal. (30)

Have you
tried it?
Tried what?
**SELLING
MANTELS.**



This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

WE WANT WORK

**Old Stove Parts Re nickeled
Like New.**

Put your Stove parts in a box and send
to us. We do the rest.
Good as the best. Cheap as the cheapest.

Long Distance Phone, Main 2993.

FAIRGRIEVE MFG. CO.,
TORONTO.

The Hamilton Steel & Iron Company

LIMITED

HAMILTON, - CANADA.

OPEN HEARTH

**STEEL CASTINGS
OF ANY WEIGHT.**

DIAMOND EXTENSION STOVE BACK

They are easily
adjusted and
fitted to a stove
by anyone.

Patented, July 11th, 1893.

Canadian Patent, June 14th, 1894.

Sold by
Jobbers
of - - -

Please your
customers by
supplying them
immediately
with what
they want.



**Hardware
Tinware
and
Stoves.**

EXTENDED.

Manufactured by **THE ADAMS COMPANY, Dubuque, Iowa, U. S. A.**

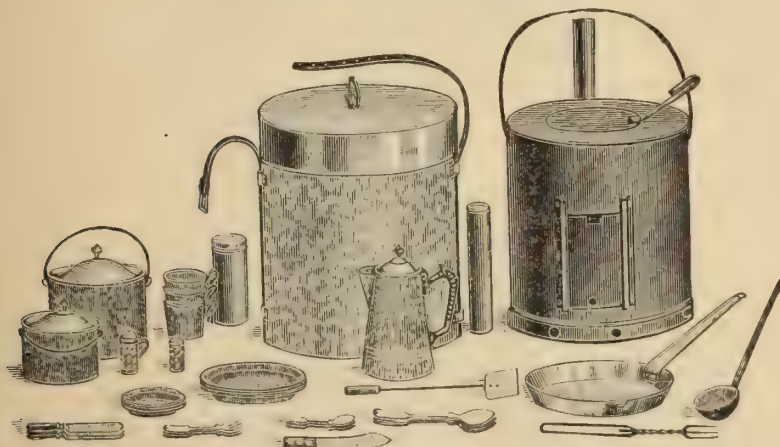
TAYLOR-FORBES CO., Limited, Guelph, Ontario.

CAMPING OUTFITS

**for Fishing and Camping
Parties, Picnics, etc.**

SUPPLIED THROUGH THE TRADE ONLY.

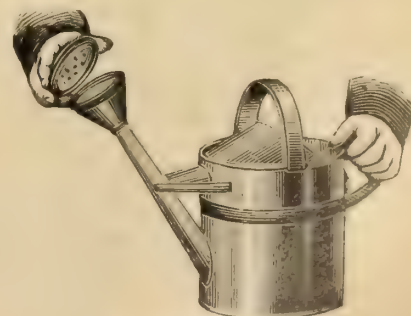
Comprising 55 Articles, for 6 Persons.



ALSO FITTED OUT FOR 3 PERSONS.

- 1 Large Galvanized Bucket, with strap and loose cover.
- 1 Wood Cook Stove, with cover, lifter, elbow and loose bail.
- 1 Tin Fry Pan, with folding handle.
- 1 Colonial Enamelled Pail, 400.
- 1 Colonial Enamelled Pail, 800.
- 6 Colonial Enamelled Soup Plates, 9 inches.
- 6 Colonial Enamelled Dinner Plates, 7 inches.
- 6 Colonial Enamelled Mugs, loose handle.
- 6 Table Knives, good quality.
- 6 Table Forks, nickel plated.
- 6 Table Spoons, nickel plated.
- 6 Tea Spoons, nickel plated.
- 1 Salt Caster.
- 1 Pepper Caster.
- 1 Colonial Coffee Pot, 013 1/2.
- 1 Round Slip Cover Tin, 1 lb.
- 1 Round Slip Cover Tin, for cutlery.
- 1 Butcher's Knife.
- 1 Daisy Flesh Fork.
- 1 Cake Turner.

55



WATERING POTS Patent Rose

Plain, Japanned, Green, or Galvanized.

Made in seven different sizes, from 1 to 16 quarts

The THOS. DAVIDSON MFG. CO. Limited. . . . MONTREAL.

HEATING AND PLUMBING

THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, July 15, 1904.

QUIETNESS to a slight extent is a feature of the plumbing supplies market this week, compared with the brisk trade that has been doing in this line for some time past. There is an increase in the demand for lead pipe and soil pipe and fittings, which is a satisfactory feature, and is due to building activity. Taking it all through, the plumbing supply business is fairly active. Prices remain unchanged.

Range Boilers—In good demand. Prices are steady, as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—Business is brisk beyond the usual volume. Prices remain steady at former quotations. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs. extra; f.o.b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—A splendid business is being done. Discounts continue, as follows: Light soil pipe, 3 to 6 in., 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

Iron Pipe and Fittings—There is still no change in the situation. As has been the case recently, it is impossible to quote with exactitude, as there is no pretence that nominal prices are being maintained closely. Subject to concessions, we quote nominal prices as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in.,

\$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Solder—There is no noted change in the price of solder this week. Bar solder is quoted at 17 1-2c, and wire at 18c.

Soldering Irons—Prices are as follows: 1 to 1 1-2 lbs., per lb., 37c; 2 lbs. and over, 34c.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, July 15, 1904.

COMPETITION in iron pipe and fittings has become so acute that some wholesale houses are selling at cost. In other materials there is no change in quotations, but there is some cutting. The volume of business being done is increasing, as building operations which were delayed in the Spring are now well under way.

Lead Pipe—Business keeps up well. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—A good trade is doing, with prices easy. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe Fittings—There is a good trade, with cutting still prevalent. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1-2 to 70 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

Iron Pipe—The low prices noted last week still prevail. A good trade is being done at the figures. We quote f.o.b. Toronto as follows: Black pipe, 1-2 in., \$1.85 to \$1.95; 1-4 in., \$1.90 to \$2.05; 3-8 in., \$2 to \$2.25; 1-2 in., \$2.25 to \$2.35; 3-4 in., \$2.85 to \$3; 1 in., \$4 to \$4.25; 1 1-4 in., \$5.75 to \$6; 1 1-2 in., \$7 to \$7.25; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27;

4 in., \$32. Galvanized pipe, 1-4 in., \$2.65 to \$2.80; 3-8 in., \$2.80 to \$3; 1-2 in., \$3.15 to \$3.25; 3-4 in., \$4 to \$4.10; 1 in., \$5.90 to \$6; 1 1-4 in., \$8.25 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

Enameled Ware—An active trade in this line continues. Though prices are firm, there is not much likelihood of an advance. We quote: "Standard," 5 1-2 feet rolled rim, first quality, at \$21.60; second quality, \$15.50 to \$16.

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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President—S. Mellon.
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President—Gil. Julien.
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LONDON.

President—B. Noble.
Vice-President—Wm. Smith.
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BARN PAINTS.



Now is the time to get after the farmer about his barns, his fences, his bridges.

Get him interested before the season closes.

Many others want paint for this class of work, too.

RAMSAY'S OUTSIDE PAINTS

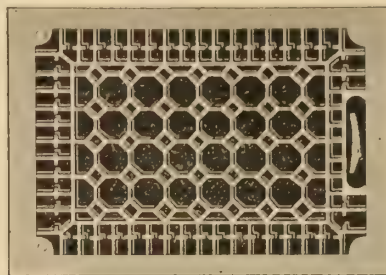
are made for that kind of work. Very strong in color, very durable, most excellent in quality. These paints sell at \$1.00 a gallon and give you a handsome profit. We have a nice little card showing just the right colors.

A. RAMSAY & SON
MONTREAL

EST'D
1842

PAINT
MAKERS

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular Illustrating our SIDE WALL REGISTERS on application.

Imperial Oxford Advertising

in the daily papers throughout Canada is causing brisk business for the merchants who handle the

IMPERIAL OXFORD RANGE.

It's good advertising for a good range. That makes good business.

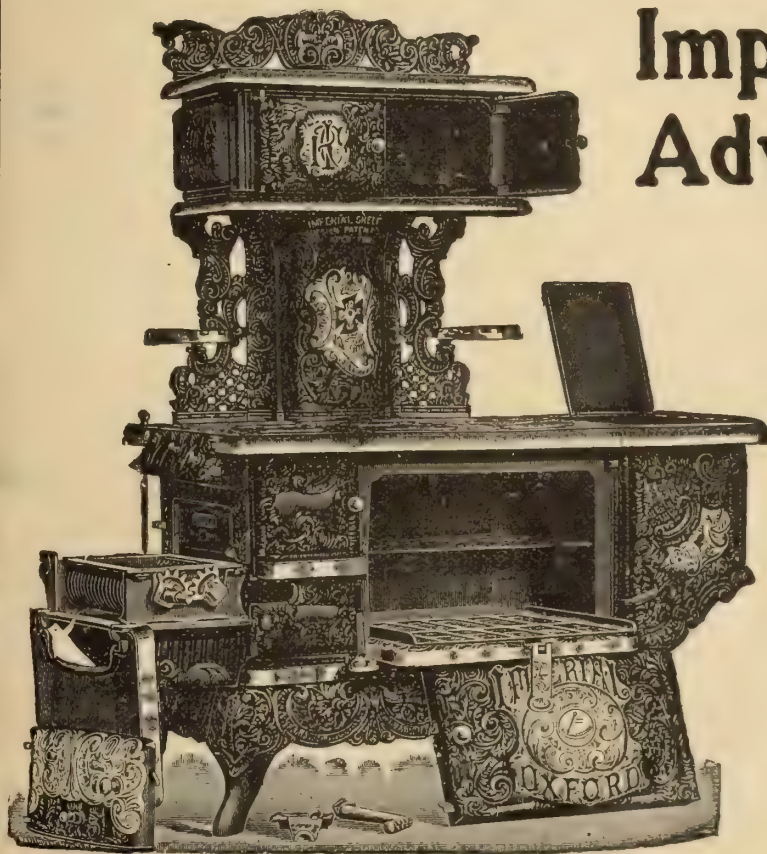
More people know the good points of the IMPERIAL OXFORD to-day than ever before. We never stop impressing them with its pre-eminence. It is the easiest range on the market to sell.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., LIMITED
CALGARY, ALTA.



"HARDWARE AND METAL" DAILY BULLETIN.

ON Wednesday, Thursday and Friday next week Hardware and Metal will issue a daily bulletin containing a report of the convention proceedings, also notes, illustrations and other matters of interest to the delegates in attendance at the national convention at Toronto next week.

These bulletins will be furnished free of charge to all delegates and visitors in attendance at the meetings. If our readers would like to have anything inserted in them the same should be sent in at least twenty-four hours before the day of publication of each issue.

On Saturday next the Annual Heating and Plumbing Number of this paper will be issued. It will contain about 112 pages, and will be full of matter of particular interest to plumbers, heating contractors and stove dealers. Copies of this issue will be sent free to all in the trade who are not on the regular list of the paper, also to the architects throughout the Dominion.

Hardware and Metal is the only Canadian paper regularly devoting space to heating and plumbing. We have always had the support of the great bulk of plumbers throughout the provinces. In this Special Number we will have the advertisements of the leading plumbing supply houses of the Dominion, as well as the majority of the best stove and furnace manufacturers.

This support, we must admit, lays upon us the obligation of giving the trade the convention news as fresh as practical, and in as interesting a form as possible. We intend, therefore, making a greater effort than ever before to make the daily bulletin and the Special Number as valuable as possible. To that end we would ask the co-operation of our readers in every way.

The National Plumbers' Convention.

EVERY indication points to an attendance at the convention of the Master Plumbers' Association of Canada which will ensure a meeting which from every viewpoint will be profitable, as well as interesting to those who attend.

It is to be hoped that every plumber in Canada will give heed to the timely call of President Thibeault, published in last week's issue of Hardware and Metal. In this letter attention is called to the fact that too often the plumber

does not fully appreciate the dignity and importance of his work to the community. President Thibeault's message is one that should be seriously considered by all the trade.

It is well, too, that the trade should cut out the following notes from Secretary Knox, and preserve them for reference when starting for Toronto:

1. Convention is to be held on July 20, 21 and 22.

2. Purchase first-class single ticket, and obtain from ticket agent a certificate to show you are attending convention. This, on being countersigned by the secretary, will ensure round trip for a fare and a third.

3. The Iroquois Hotel is the rendezvous.

4. The Temple Building, where the association has met and done good business before, will be the place of meeting.

5. Provinces not yet thoroughly organized ought to bestir and weigh well the proposal to hold the convention triennially instead of annually.

6. All master plumbers, from the Arctic to the great lakes, and from the Atlantic to the Pacific, are welcome. The distance is no greater, perhaps, that the goods you buy have to travel. This may remind you that a visit on the side to the supply houses may make you money.

The reception committee appointed by the Toronto association and the supply houses to prepare a programme which will guarantee "a good time for the boys," have been in frequent session this week.

The programme for the three days has been arranged as follows:

WEDNESDAY, 20TH INST.

10 a.m.—Reception of delegates.

2.30 p.m.—Drive around the city and neighborhood.

8.30 p.m.—Banquet at McConkey's.

THURSDAY, 21ST INST.

9 a.m.—Association meets in business session all day.

FRIDAY, 22ND INST.

9 a.m.—Conclusion of association business.

2.30 p.m.—Trolley ride to Long Branch, where games will be played in the afternoon.

6.30 p.m.—Dinner at Long Branch.

7.30 p.m.—Dancing and music at Long Branch.

W. J. Burroughes in London.

Many Canadian plumbers will be pleased to learn that W. J. Burroughes, who was at one time secretary of the Toronto Master Plumbers' Association, is now well established in business in London, Eng. The style of his firm now is W. J. Burroughes & Son, heating and electrical sanitary engineers, 143 Queen Victoria street, London, E. C. The works are at Shepherd's Bush, in the western residential end of the metropolis. In conversation with the London representative of Hardware and Metal, Mr. Burroughes evinced great interest in the work of the craft in Canada.

Notes of the Plumbing Trade.

George A. Finlayson and R. Nelson Cavers have registered under the style of Finlayson & Cavers, electricians, Montreal.

Gagnon & Lorin, plumbers, Montreal, have dissolved. Joseph Gagnon has registered as proprietor of the business.

The Maritime Electric Co., dealers in electrical supplies, Halifax, have assigned for the benefit of creditors.

Shotton & McCughan, hardware dealers, plumbers, etc., Kamloops, have sold their hardware business to T. H. Leeming, transfer to be made August 31. H. Shotton continues the plumbing business.

Rebecca Chevalier has registered under the style of L. Frenette & Cie., plumbers and hardware dealers, Grand Mere, Quebec.

The City of St. Thomas is offering \$128,239 to the local gas company for their plant.

Napoleon Desormeau and Wm. Crowder have registered under style of Crowder and Desormeau, plumbers, etc., Montreal.

Building Notes.

J. G. MATHIESON, secretary of the Board of Education, Campbellford, Ont., is calling for tenders for the steam heating, ventilating and plumbing of the Campbellford public and high schools. Plans and specifications may be seen at the office of the secretary in Campbellford, or at the office of the John Ritchie Plumbing & Heating Co., 64-66 Adelaide street east, Toronto.

Dr. Hutt will erect a residence in Newmarket, Ont.

A new school house is being erected in Pilot Mound, Man.

Geo. Hammett will erect a dwelling on Queen's avenue, London.

The corner stone of the new town hall in Port Dover, Ont., has been laid.

The Grand Trunk Railway propose to erect a new depot in Walkerton, Ont.

The foundation of the new Methodist church at Dunnville, Ont., has been laid.

A. Heilig will build a residence on John street, Hamilton, to cost \$1,500.

Thos Ryan will erect two blocks on Princess and Notre Dame streets, Montreal.

The University of New Brunswick, St. John, are going to erect a new gymnasium.

G. A. Glines, real estate agent, Winnipeg, is erecting a business block on Portage avenue.

The Canadian Northern Cleaning & Drying Co. will probably build a plant in Port Arthur, Ont.

The Grand Trunk Railway will erect a new station at Port Hope, at the junction of the main line and the Midland Division.

The concrete work on the foundation of the new hotel and station of the Canadian Pacific Railway, in Winnipeg, has been commenced.

Tenders are being called for the erection of a new immigration hall in Winnipeg, to cost \$200,000. It will be erected near the new C. P. R. station.

There is still the complaint in Galt of scarcity of dwellings. The Galt Reformer says that local contractors and carpenters have more work than they can conveniently handle, especially because labor is so scarce. Among the buildings most recently started are: Dwelling for W. Mullett, three dwellings for Mrs. J. Pollock, dwelling for E. Rolofson, dwelling for M. Kirkland, dwelling for Wm. Grill, dwelling for P. W. Gardiner, and two dwellings for Jas. Scott.

Building Permits.

MONTREAL.

S. Girouard, St. Catherine street, one store, \$4,000.

Martinau & Co., Dorien street, one factory, \$8,460.

John Bumbray, Prefontaine street, one house, \$2,500.

Alfred Lalonde, St. Patrick street, one house, \$1,800.

Genereux & Forget, Chausse street, one dwelling, \$2,300.

L. C. Masson, Brant Lane, alteration on building, \$2,000.

Joseph Daniel, corner Sherbrooke and Visitation, one house, \$4,500.

Estate Hon. G. W. Stephens, one factory on St. Antoine street, \$12,000.

J. B. Sparrow Amusement Co., alteration on theatre on Guy street, \$4,000.

QUEBEC.

Emil Moussette, building on Latourcelle street, \$2,000.

A. Jobidon, building at corner of Montcalm and Alceyn streets, \$3,000.

HAMILTON.

Thomas Roussell, dwelling on Madison street, \$1,400.

H. Hammill, dwelling on Catharine street, \$2,800.

Hamilton Distillery Co., addition to plant, \$2,000.

A. Ballentine, two dwellings on Main street, \$2,800.

A. Moote, six dwellings on Grant avenue, \$9,000.

M. MacCallum, two dwellings on Hannah street, \$3,200; and one on King street, \$1,900.

Heaters in Australia.

There is reported to be a good opening for heating apparatus in Australia. Advertisers state that on the high land there is some snowfall, and everywhere south of Queensland, and in some parts of that state, a cold wind blows from the interior plains that necessitates some method of heating the houses during the cold months. The open fireplace is depended upon for this purpose, and, in public buildings and large residences particularly, this is expensive in fuel and ineffective. There is an opening, particularly in churches, schools, and shops beyond the coast line.—Plumbers' Review, London.

Sheet Metal Stock List.

M. & L. Samuel, Benjamin & Co., Toronto, have issued their July stock list, giving details of stock awaiting shipment to the trade. The list embraces galvanized sheets, black sheets, rolled steel sheets, Russia iron, tinned sheets, Canada plates, taggers iron, terne plates, tinplates, charcoal tinplates, iron bars, sheet zinc, as well as a full line of brass, copper, iron and steel, iron pipe, cotton waste, wire, and other metals. Copies of this stock list will be sent to any readers of Hardware and Metal on application.

NEW LEAD PIPE EXPANDING TOOL.

Mr. S. V. Armstrong, representing the Stanley Rule & Level Co., New Britain, Conn., is introducing a new line of braces, levels, screw drivers and a new lead pipe expanding tool to the Canadian trade.

"A RECORD, NOT A PROSPECTUS."

Mr. Fielding said in a recent speech at Toronto, that he would present "a record, not a prospectus."

That is what we wish to do to-day with reference to "C" brand Horse Nails.

Our Company has a record of thirty, nine long years in making Horse Nails: our works being established in Montreal in the year 1865, and are the oldest and largest in Canada devoted to the exclusive manufacture of Horse Nails.

The record of the "C" brand Horse Nails for that long period shows that they have always been accepted as the standard—that means they were the best—they are still the standard to-day.

The record of sales shows that there are more "C" brand nails sold in Canada than any other; we believe nearly equal to all the other brands put together.

The record of current prices for thirty nine years shows that no other brands of Horse Nails made in Canada have ever been quoted at higher prices than the "C" brand, which is a confession on the part of all other manufacturers that they do not value their nails as equal to the "C"—that is their record!

We would like to record every Dealer and Farrier in Canada as purchasers of "C" horse nails this year. Will you buy them the next time you order? Ask the Farrier to whom you sell them to note carefully the results. He should find every nail perfect and ready to drive, and that they will hold on the shoe longest, and be free from split nails, or heads flying off; a common fault with low-priced nails.

We shall be pleased to furnish, on application to us, free samples of "C" nails for distribution and trial among your Farrier customers.

**CANADA HORSE
NAIL COMPANY,
MONTREAL**

Standard Technical Works

Books Written for the
Metal Merchant or
the Metal Worker.

A Manual of Mechanical Drawing.

By Philip D. Johnston; 65 full-page plates and 2 folding plates, with full text and 134 illustrations; cloth.....\$2.00

Domestic Electrical Work.

By W. A. Wittbecker. How to wire buildings for bells, alarms, annunciators, and gas lighting from batteries. 55 pages, illustrated; paper, 25c.; cloth.....50c.

Ladd's Discount Book.

By W. J. Ladd, showing net of any sum at all discounts; cloth, \$3.00; double indexed.....\$4.00

Blue Print Making.

A pamphlet. Directions for Constructing and Printing Frame, Preparing the Paper and Making Prints of Various Kinds. 28 pages.....25c.

Architects' Handbook on Cements.

By Addison H. Clarke. Specifications for mixing and using cements. 96 pages....\$1.00

Metallurgy of Cast Iron.

By Thos. D. West. Showing processes involved in its treatment, chemically and physically, from the blast furnace, through the foundry, to the testing machine. 627 pages, 153 illustrations....\$3.00

Galvanizing and Tinning.

By W. T. Flanders. Coating with tin and zinc; also tinning gray iron castings....\$2.00

Practical Plating and Polishing.

Best and Most Approved Methods of Preparing and Cleaning all Metals for Electro-Plating and Polishing. 114 pages, illustrated.....80c.

New Metal Worker Pattern Book.

By Geo. W. Kittredge. Pattern cutting as applied to all branches of sheet metal work, 430 pages, 744 illustrations.....\$5.00

Tinners' Helper and Pattern Book.

By H. K. Vosburgh. Rules, diagrams, tables, 123 pages, 53 figures.....\$1.00

Roofing, Cornice and Skylight Manual.

Laying flat and standing seam roofing, cornice shop practice and skylight construction, 175 pages, 170 illustrations and 13 plates.....\$1.50

Furnace Heating.

By Wm. G. Snow. Comprehensive treatise on warming buildings with hot air, with appendix on furnace fittings, 170 pages, 90 illustrations, cloth.....\$1.50

Plumbing Problems.

House drainage and plumbing, 244 pages, 146 illustrations.....\$1.50

Practical Hints on Joint Wiping.

For beginners in plumbing, 66 pages....25c.

Enquiries for above books should be
sent to The Editor

STOVES AND TINWARE.

Specifications for Tin Roofing.

MOST of the leaky tin roofs I find to have given way at the seam.

You may examine a leaky roof where good tin has been used originally, and you will find that the sheet generally is in good condition, but all along the seam, on top and on the edge you will find a number of little rusty spots, and in using a sharp point you can push it through in many places. Some say the rosin was not properly scraped off after soldering. This is nonsense. The fact of the matter is, that most of the tin roofs are practically ruined when the tinner gets off the job for the reason that he used "plenty of rosin, used a hot iron and soaked well," says a writer in the Metal Worker.

In soldering with rosin on top of the seam with a hot iron, it is true that by using plenty of rosin the seam is being soaked well, but on account of the great heat to which the rosin is subjected it will carry the solder and the original coating of the tin off the seam, leaving that part over which the iron was carried practically bare with a thin skimmed coat, having on it neither solder nor much of the original coating. Tiny specks of rosin will remain on that part which can hardly be scraped off because they can hardly be seen. In course of time, however, these specks of rosin will crack off and take the tin with them.

I have seen the very best of tin put on by the best workmen out of different shops in exactly the same manner as described above, and because of this experience I have changed my way of putting on tin roofing, and the results have been very gratifying, and in mentioning this to others who have had practical experience, I have found that their experience has been the same as mine. Of course, men who sit at the desk and let other men look after the work will never gain any real knowledge for themselves, but will always stick to the old theory of their forefathers.

The way to put on a tin roof is to keep the rosin away as far as possible. Take muriatic acid, well dissolved with zinc; use 55 per cent. water and 45 per cent. acid; use this solution, solder well and wipe off with a rag when done. In soldering with this solution a little steam is created sufficient to chill the solder as the soldering iron moves along which prevents the solder from running

off the seam. The movement of the soldering iron ought not to be too slow, especially when the iron is very hot.

Since using this method I have yet to hear the first complaint of any tin giving way in an unreasonably short time. I would challenge any one to prove to me that I am wrong.

Their Building Nearly Ready.

The plans for the new buildings for the Down Draft Furnace Co., to be erected on the Stone road, are now nearing completion. There will be three buildings with an entire length of 280 feet and a width of 60 feet. Contracts will be called for very soon. The Down Draft people are receiving so many orders that it has been found necessary to construct a temporary addition to their factory at Norwich.—Galt Reporter.

Ready to do Nickel Plating.

The Fairgrieve Mfg. Co., Toronto, have added a nickel plating plant to their establishment. It is not known to many stove dealers that they can take off the nickel parts of a stove and have them replated in such a way that when the stove is polished up it looks as bright and attractive as a new one. To meet the wishes of the trade in this work the new plating plant of the Fairgrieve Co. will be devoted. They also intend making a specialty of antiquing and bronzing, and would like to communicate with any of the trade desiring this class of work done.

PHILOSOPHY OF A TRAVELING SALESMAN.

An old traveling man recently consented to give some advice, born of his experience, for the benefit of his younger brethren. There is sound philosophy in the following suggestions:

A salesman who seeks to establish himself on a good footing by unfair means is soon "spotted" by his fellow salesmen. He loses the confidence of the first and the friendship of the latter. He is not a salesman, but a bribe-giver or something worse.

Work hard, intelligently and perseveringly on your own line of goods. Never fear competition; do not see it, hear it nor feel it—that's the way to make competition fear you.



PIPE BRANDED

WE MAKE IT! YOU WANT IT!

IF YOUR JOBBER WILL NOT SUPPLY YOU LET US KNOW
AND WE WILL TELL YOU WHERE TO GET IT.

The cost may be a little more but it is
worth the difference.



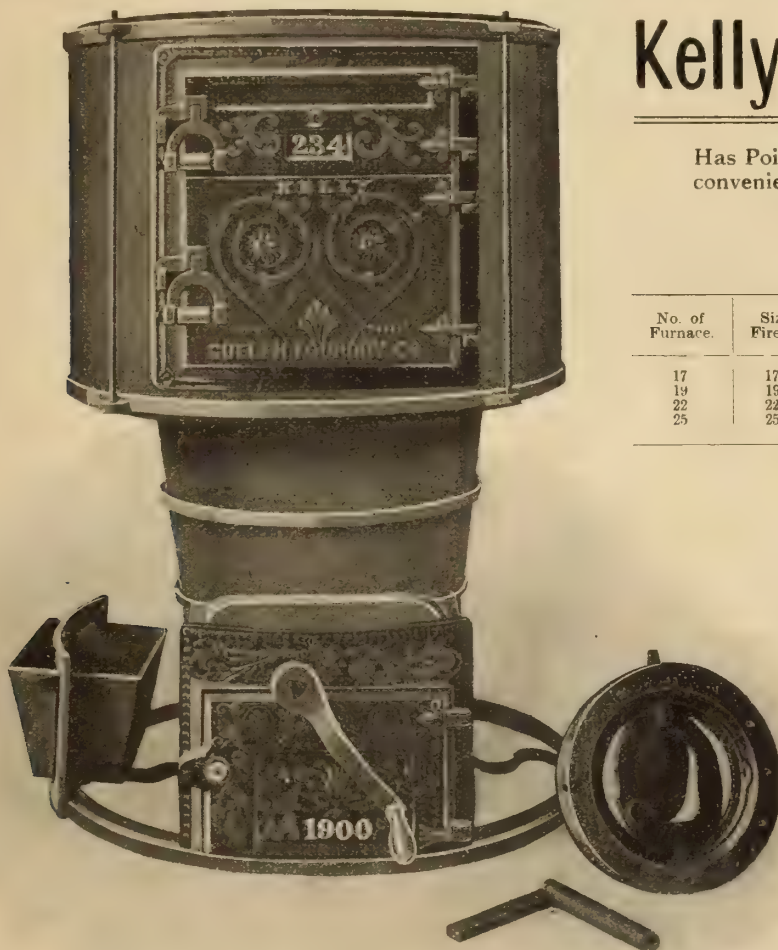
RETURN
JUL 28 1904
P.H. Book
Page
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Page-Hersey Iron & Tube Co., Limited, Guelph, Can.

NOT IN THE COMBINE

Ask for Prices of
Shovels, Spades, Scoops, Etc.
WE HAVE A LARGE STOCK.

CANADA HARDWARE CO., Limited, Montreal



Kelly Warm Air Furnace

Has Points of Superiority, both as to construction and
convenience, which recommend it above all others.

Why install a Furnace of whose
efficiency you are in doubt?

No. of Furnace.	Size of Fire Pot.	Height of Furnace.	Size of Smoke Collar	Weight.	Heating Capacity
17	17 in.	44 in.	7 in.	600 lbs.	7,000 to 12,000 cubic ft
19	19 in.	45 in.	7 in.	700 lbs.	10,000 to 20,000 cubic ft
22	22 in.	47 in.	8 in.	800 lbs.	15,000 to 28,000 cubic ft
25	25 in.	49 in.	8 in.	900 lbs.	25,000 to 40,000 cubic ft

IMPORTANT FEATURES.

Bottom Casing Ring—Is made solid to ash pit,
making furnace easy to set up.

Grate Bars—Consists of four heavy triangular
bars. Any section can be easily removed.

Double Feed Door—Permits using large
chunks of wood as fuel.

Automatic Gas Damper—Completely pre-
vents any danger from gas explosion.

Direct Draft Damper—Gives you complete
control of the fire.

Dust Flue—Carries off all dust from ash pit.

Radiator—Is large and made of heavy steel plate
and cast iron. Large combustion chamber. Reversible
fire travel.

OUR PRICES ON THIS FURNACE WILL INTEREST YOU

Guelph Foundry Co.,
GUELPH, ONT. Limited

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE output of the collieries of the Dominion Coal Co. for June was 336,000 tons, which is 290,000 tons in advance of any previous monthly output. The equipment at the mines is now sufficient to run the output up to 100,000 tons per month. The shipments of coal for June amounted to 347,357 tons.

• • •

The Graham Carriage Works, Napanee, Ont., have been destroyed by fire. The loss is estimated at about \$5,000, covered to the extent of \$3,700 by insurance. The varnish shop was not damaged. Mr. Graham intends to rebuild at once on a larger scale than the former factory.

• • •

Cornelius Shields has been appointed general manager of the Consolidated Lake Superior Co. by the directors. It has been stated by one of the directors that the steel plant will be the first to be operated. It will, however, be some weeks yet before operations are started, since the raw material and skilled labor have yet to be obtained.

• • •

At a recent meeting of the Canadian Manufacturers' Association, in Montreal, a decision was reached by which the city will be petitioned not to pass the Act restricting factories from being built in certain districts of the city. The association claims that there were certain streets proposed to be restricted, the residents of which approve of the establishment of industries there.

• • •

At the recent meeting of the shareholders of the Kemp Mfg. and Metal Co., Winnipeg, the following directors were elected: A. E. Kemp, M. P.; A. W. Kemp, J. A. E. Wildman, Wm. Crawford, and G. D. Minty. At a subsequent meeting of the directors the following officers were elected: President, A. E. Kemp; vice-president, W. A. Kemp; managing directors: Wm Crawford and J. A. E. Wildman.

• • •

The Windsor Standard says that a large manufacturing plant known as the Canadian Adjustable Bearing Co., with a paid-up capital of \$100,000, has been

formed in Windsor, and will manufacture adjustable bearings for steam and electric cars. The head offices of the company are in Detroit, while the Canadian head offices are at Windsor. The officers of the Canadian company are: President, J. F. Harrington, Detroit; vice-president, I. W. Durfee, Detroit; secretary and treasurer, F. H. Macpherson, Windsor.

NOTES.

Contracts are being let for the construction work on the James Bay Railway.

The Singer Sewing Machine Co. have decided to establish new Canadian works at St. Johns, Que.

Fire has done damage to the sash factory of Mason & Edge, Montreal, to the extent of \$8,000.

The Sanford Mfg. Co., Hamilton, will hold their annual picnic at Niagara Falls, on Saturday, July 16.

The employees of the Canadian Otis Elevator Co., Hamilton, will hold their annual picnic at Niagara Falls, on July 30.

The plant of the Canadian Pacific Lumber Co., Port Moody, British Columbia, has been destroyed by fire. The loss is estimated at \$75,000.

Operations have been suspended at the four steel hoop plants of the Carnegie steel industry, two at Youngstown, and one each at Gerard and Warren.

The Dominion Government have under consideration the erection of a large elevator at Port Colborne, Ont. Plans are being prepared by Jas. Jamieson, Montreal.

The gross yield of the mines of the Province of Quebec for the year 1903 give a total value of \$2,772,762. There were 4,662 workmen employed whose wages amounted to \$1,308,925.

The employees of the Hamilton Bridge Works, Hamilton, will hold their annual picnic at Mohawk Park, Brantford, on July 23. The officers of the committee in charge are: A. H. Phoenix, J. J. Dillon, and A. E. Machin.

It has been decided by capitalists, represented by J. C. Fernan, to erect a zinc smelter at Fernie, B. C., to cost \$100,000. At Fernie the supply of fuel

will be obtained, and that is the reason for situating the smelter there.

In order to entice the Western Mfg. Co. to remove their plant from Indian Head to Regina, a by-law has been carried by the ratepayers of that place granting a ten years' exemption from taxation on the property and plant of the company.

The new saw mill of the Davison Lumber Co., Bridgewater, N. S., has commenced operations. The mill is equipped with modern machinery and is capable of a daily cut of 65,000 feet, although the average daily output will probably not be more than 40,000 feet.

COMPANIES INCORPORATED.

The Resources Publishing Co., Montreal; capital, \$100,000; purpose, to carry on a general publishing business. The directors are: F. Maltham, G. O. Kerr, H. B. Orde, W. F. Chipman, and F. H. Markey, all of Montreal.

The Renfrew Rink Co., Limited, Renfrew, Ont.; capital, \$10,000; purpose, to conduct a rink for skating and hockey in the Town of Renfrew. The directors are: J. G. Barnett, W. A. MacKay, A. F. Jamieson, and M. J. O'Brien, all of Renfrew.

The Empire Salt Co., Limited, Sarnia, Ont.; capital, \$50,000; purpose, to carry on the business of a manufacturer of, and dealer in, salt. The directors are: J. I. Carter, C. H. Rogers, J. H. Kittermaster, D. Milne, and A. S. Burham, all of Sarnia.

The Hawkesbury Electric Light and Power Co., Hawkesbury, Ont.; capital, \$100,000; purpose, to carry on the general business of an electric light and power company. The directors are: T. Ross, Jas. Ross, J. W. Ross, M. Ross, and G. Waddel, all of Hawkesbury.

Canadian Trade Journals, Limited, Montreal; capital, \$10,000; purpose, to purchase the business carried on by the Burnside-Smith Publishing Co., Limited, Montreal. The directors are: E. M. Smith, H. R. Smith, J. M. McTavish, F. Bacon and Geo. B. Foster, all of Montreal.

LICENSES GRANTED.

Gallagher, Holman, Lafrance Co., incorporated under the law of Ontario, to purchase the business and assets of the Rat Portage Meat Co., Rat Portage, Ont., provided that the company do not use in Ontario a sum larger than \$75,000.

CHARLES BAYNES, England.
MAKER OF THE **"CLICK-CLACK"**
HACK SAW BLADES.

In Factory Solely
Devo ed to Making
Hack Saw Blades.

**NONE
BETTER.**

In All sizes
of Best
English Steel.

The Hanover Portland Cement Co., Limited
HANOVER, ONTARIO.

Manufacturers of **"Saugeen Brand"**
the Celebrated **OF PORTLAND CEMENT.**

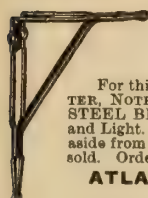
Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially
designed for export With or without "Emlyn"
Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— Emlyn Engineering Works
"Machinery," Newport. NEWPORT, MON., ENGLAND



Will Hold Up a Shelf !

That's what a shelf bracket is for.
For this purpose there can be NOTHING BET-
TER, NOTHING CHEAPER than the **BRADLEY
STEEL BRACKET.** It is well Japanned, Strong
and Light. The saving in freight is a good profit,
aside from the lower price at which the goods are
sold. Order direct or through your jobber.

ATLAS MFC. CO.,

New Haven, Conn., U.S.A.

To Manufacturers' Agents

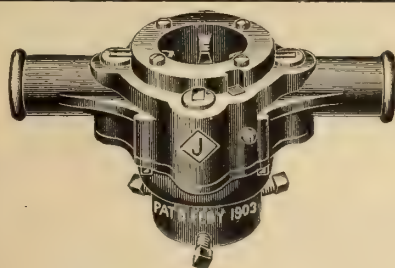
Hardware and
Metal has in-
quiries from time
to time from
manufacturers
and others want-
ing representat-
ives in the leading business centres here
and abroad.

Firms or individuals open for agencies
in Canada or abroad may have their
names and addresses placed on a special
list kept for the information of inquirers
in our various offices throughout Canada
and in Great Britain without charge.

Address

Business Manager

HARDWARE AND METAL
Montreal and Toronto



It is a fact that one man with our **PATENT
PIPE DIE** can easily do the work of two
men with any other. Send us your address
and we will explain HOW and WHY.

A. B. JARDINE & CO.

Mfrs. TAPS and DIES.

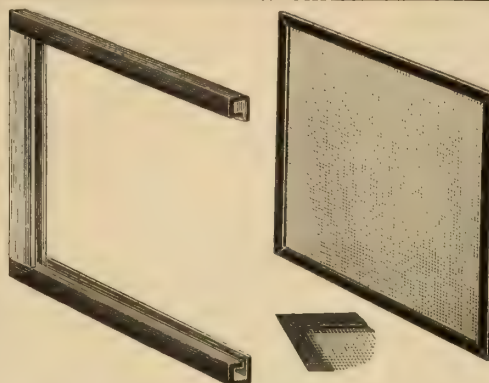
HESPELER, ONT.

PIG IRON

FOR
IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.



Are They Better?

Answer your own question.
Send for descriptive matter
concerning our Metal Window
Screens (cost the same as wood)
and settle the question for your-
self which is better—Metal or
Wood ?

C. M. CUTTS & CO.

Makers, Toronto Junction, Ont.



Pedlar's "Perfect" Metal Lath

CHEAP AS WOOD

Delivered to any railway station
in Canada, for 10c. per square
yard. Discount to dealers. Cir-
culars and samples on request.

Pedlar People, Oshawa, Can.,
or 767 Craig St., Montreal,
Que.

WORK AND PRICES RIGHT

GALVANIZING

ONT. WIND ENGINE & PUMP CO. TORONTO, ONT. LIMITED.

Order a stock of

"Windmill Best" Galvanized Sheets

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.
STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, - Montreal

3 MINUTES HALF HOUR



THE "UNIVERSAL" BREAD MAKER and RAISER....

Will thoroughly Mix and Knead BREAD in Three Minutes.

Without putting hands to the dough. Simple and Easy to clean.

Sold by

E. T. WRIGHT & CO.
HAMILTON, CAN.

MODERN MAGIC!

A WONDERFUL SELF-LIGHTING GAS MANTLE

Ignite

LOOK FOR THE MARK ON EVERY BOX CONTAINING A SELF-LIGHTING GAS MANTLE

Auto Lighter Co.

No more matches required to light the gas.
The "IGNITE" Mantle lights when the gas is turned on.
Write for booklet and samples.

The **International Gas Appliance Co., Limited**
164 BAY STREET, TORONTO, Canada

PREFERENCE FOR SOUTH AFRICA.

THE Governor-General has approved of an Order-in-Council adding the Cape of Good Hope, Natal, Orange River, the Transvaal and Southern Rhodesia to the list of British colonies entitled to the benefits of the British preferential tariff in Canada, dating from first of July, instant. This is in return for the preference extended by the South Africa customs union convention in Canada. On certain specified articles in South Africa preference amounts to 2 1-2 per cent., which is the whole ad valorem duty. These articles are: Acids, bolts, nuts and rivets, chain, cranes and elevators, belting, hoes, machinery, electrical and otherwise; electric cables, piping and tubing, railway supplies of all kinds, including steel rails, sleepers, traction engines; tramway construction supplies, wire and wire netting for fencing, and wire rope. In the case of other articles imported under an ad valorem duty the preference is 25 per cent. As the ad valorem duty is 10 per cent. the duty on articles from Canada will be 7 1-2 per cent.

Canadian exports to British Africa last year amounted to \$1,931,541. For the calendar year 1902 the imports via the Cape of Good Hope were \$166,000,000. Via Natal for the same year the imports were \$76,000,000. The United States sent in via the Cape of Good Hope in 1902 goods to the amount of \$16,000,000. By way of Natal the value of the goods from the United States was \$6,000,000. The class of goods we export to South Africa are bicycles, flour, chairs, agricultural implements, cotton, lumber, doors, sashes and blinds, household furniture, dairy products, musical instruments, carriages and harness, hay, condensed milk and provisions. With the aid of the preference and the direct line of steamers established by the Ottawa Government between the Dominion and South Africa, Canada ought to enjoy considerably the best of it in commercial competition with the United States.

Advertising educates as to better methods of living, dressing and home building and furnishing; as to improved and more profitable ways, means, implements, machinery and appliances for manufacturing, farming, or any kind of business.

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

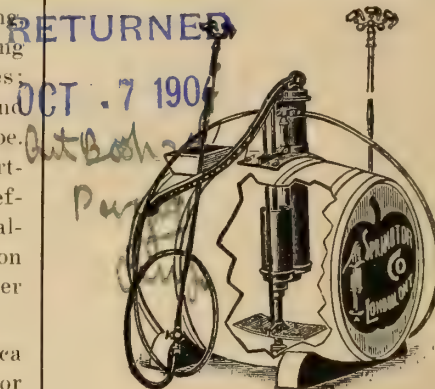
Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

U.S. and Foreign Patents, Caveats, Copyrights and Trade Marks. Military and Naval Inventions a specialty. Address,

Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP
Warren White Sulphur Springs,
Totten P.O., Virginia.



THE SPRAMOTOR

is recognized by the users as the most durable and efficient apparatus yet invented, for the

Prevention of blight and bugs on fruit and potatoes.

For the destruction of wild mustard in the grain crops without injury to the grain, and for

The painting of buildings.

Has been awarded First Place by the Canadian Government in actual contest, and

The Gold Medal at the Pan-American.

The Trade fully protected.

Write for particulars and discounts. Terms liberal.

THE SPRAMOTOR CO.,

68-70 King St., LONDON, CAN.



METAL SKYLIGHTS and WINDOW FRAMES

Glazed with FIREPROOF GLASS.

CORRUGATED IRON and FIREPROOF DOORS
ROOFINGS, CORNICES and CEILINGS

A. B. ORMSBY LIMITED,
MANUFACTURERS AND CONTRACTORS,
Cor. Queen and George Streets,
TORONTO, ONT.

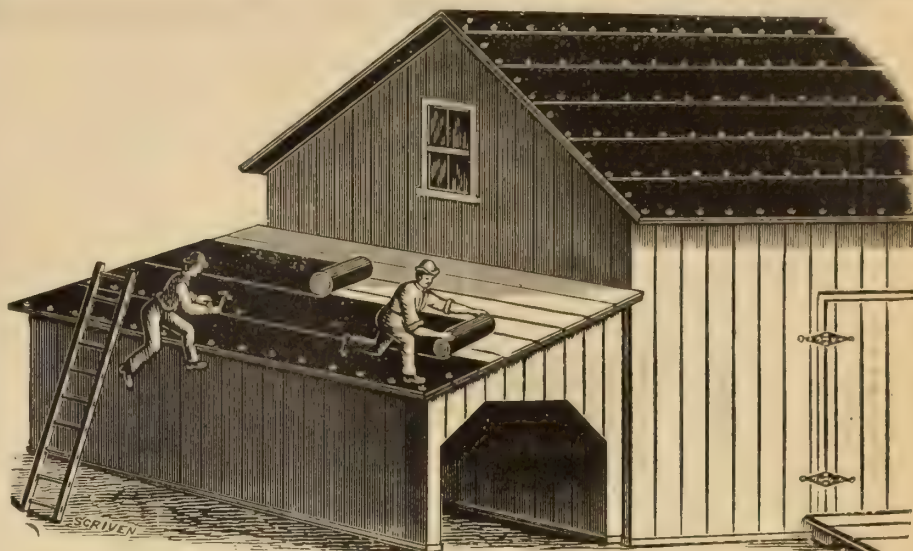
. FULL STOCK .

Salt Glazed VitrifiedDouble Strength Culvert Pipe
a Specialty.**THE CANADIAN SEWER PIPE CO.**HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.**PORTLAND CEMENTS**Best German, Belgian and English
Brands.FIRE BRICKS
FIRE CLAY
FLUE LININGS
DRAIN PIPES
HARD WALL PLASTER
CALCINED PLASTER
WHEELBARROWS
MORTAR STAINS.A Full Stock of Builders' and Con-
tractors' Supplies.**W. McNALLY & CO.**40 to 52 McGill St. (Cor. Wellington St.)
MONTREAL.

Write for our quotations.

A PERMANENT
and Handsome Roof.**Arrow Brand Asphalt Ready Roofing.**

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sole agents being appointed in each district. Write today.**USE MICA ROOFING**For Flat or Steep Roofs. It is Waterproof,
Fireproof, quickly and very easily laid, and
cheaper than other roofing.**HAMILTON MICA ROOFING CO.,**

60 Catherine Street North, - - - HAMILTON, CANADA.

"LOOK FOR THE BOY" EVERY ROLL

We have made a study of the good qualities of

REX FLINTKOTE ROOFING

and if you would become acquainted with it you would be as enthusiastic about its good qualities as we, and use it in preference to shingles, tar, tin, gravel, or any other roofing. It is fast superseding all of these, as it costs less, lasts longer, and has none of their faults or defects. It is made of the best matted wool fibre treated by our own compounds, and is waterproof and fire-resisting. We will send free samples and our handsome illustrated book on receipt of your name.

J. A. & W. BIRD & CO.,
47 India Street,
Boston, Mass.

A few lines from our large
stock of Cast Hardware :Jack ScrewsMortising MachinesShelf BracketsAlaska Stove Lifters and PokersGrindstone FixturesGarden Settees

ETC., ETC., ALWAYS ON HAND

The H. R. Ives Co., Limited, 117 Queen St., Montreal**The Saw That Sells Itself.**When placed in the hands of the intelligent mechanic the **ATKINS** High Grade Silver Steel Hand Saw sells itself. You simply show it and the saw does the rest.**ATKINS** Silver Steel Hand Saws with Perfection Handles are warranted the **FINEST** Saws on earth in material, temper, grinding and finish.

Write for Catalogue and Prices.

E. C. ATKINS & CO.C. D. TEN EYCK, Sales Agent for Canada.
Toronto Office: 30 Front St. East. Tel. Main 1896.**ATKINS**
ALWAYS AHEAD
Leading Saw and Tool Manufacturers
Factories: INDIANAPOLIS, IND.
Northwestern Branch: Minneapolis, Minn.

THE OFFICE END

DEVOTED TO THE
OFFICE STAFFS OF
BUSINESS
ESTABLISHMENTS

TREATMENT OF CASH DISCOUNTS.

By C. A. Rose in The Bookkeeper.

It is understood that cash discount is handled separately from bank discount, but the latter being a form of cash discount the writer claims that it should be posted in a general "discounts" account.

The subject must be handled from the business man's point of view, and not from a book-keeper's theoretical standpoint. The well posted salesman has in mind, when making a price, whether his customer takes advantage of cash discounts or takes full time. It is a fact when the salesman makes a very close price he stipulates "no cash discount." It therefore follows that cash discount on sales should appear in trading account. The buyer also considers whether his firm "discounts" or not when determining the price he will pay on purchases.

The matter of interest of loans from bank to enable the business man to take advantage of discounts, and the discounting of notes which he has been obliged to take for goods sold (bills receivable) are entirely different matters and pertain to capital, or the lack of it. Such being the case, it would seem that bank discounts are a "general expense" and must be transferred from "discounts" account to profit and loss direct.

Therefore, to get a clear idea of this subject it is necessary to divide cash discounts into three parts.

Discounts on bills receivable (bank discounts).

Discounts on purchases.

Discounts on sales.

The first is a general expense, and not chargeable to purchases, for the reason that discounts are not taken at the bank except when capital is short. The second should be carried to trading account with the amount of purchases. The third is also a matter for trading account. By putting the latter two in trading account the writer is claiming that the business man considers the discounts when making purchase or sales prices. It is contended also that the amounts of discounts should appear in trading account on the same side of the account as the amount on which it is a discount.

The writer holds that the simplest way to handle cash discounts is to carry all cash discounts in one tabular account under sub-heads. The account may be called cash discounts.

The ledger should be double ruled, Dr. and Cr. under each head.

The balance of interest and discount should be transferred to profit and loss direct with the other general expense items at the end of the period.

The balance of discount purchases should be transferred to purchases account and from that transferred to trading account at the end of the period. When making the transfer to trading account it should be itemized, as

Trading account Dr.	
To Purchases account	\$.....
Less discount	\$.....
	\$.....

The balance of "discount sales" should be treated in the same manner as discount on purchases.

Sales account Dr.	
To Trading account	\$.....
Less discount	\$.....
	\$.....

It is advisable to transfer accounts to trading account and profit and loss account only once a year because all comparisons and calculations are made by the year, and it makes it much simpler for the accountant to make his monthly statement of earnings and expenses. By keeping the above accounts as suggested for the whole year before transferring to profit and loss and trading account, the asset and liability statement can be made more easily. All the open expense and earning accounts showing as undivided expenses and undivided earnings. The columns of each discount account will have to be footed at the end of each month for the trial balance, and these footings can be of use when making up the monthly statement. Deducting the footing used at the end of the previous month from that of the present month, the result will be discount for the present month and the item to be used in making up the monthly statement.

When itemizing in the monthly earnings statement the deductions and totals on the line below when a "short column" is used should be put:

	JANUARY.	
Sales account		\$.....
Less discount		\$.....
Net		\$.....
Purchases account	\$.....	
Less discount	\$.....	
Net	\$.....	
Balance gross profit from Trading account	\$.....	
Totals	\$.....	\$.....
Gross profit as above		\$.....
Sundry Trading Expense accounts	(\$.....)	
	(\$.....)	
Balance, net trading profit	\$.....	
Totals	\$.....	\$.....
Net trading profit as above		\$.....
List	(\$.....)	
General	(\$.....)	
Expenses	(\$.....)	
"Int. & Disc."	(\$.....)	
Salaries	(\$.....)	
Pay roll, etc.	(\$.....)	
Balance, net profit month January	\$.....	
Totals	\$.....	\$.....

By making up this statement in a trial balance ruled for twelve months with fly leaves and putting deductions and addition on the line below, it is possible to make comparisons with any previous month's business. For convenience the yearly deductions and totals may be transferred to a special statement book ruled after the same manner with numbered lines, and, by putting each account on the line in the yearly book that it occupies in the monthly book ready reference and comparison may be made of the monthly and yearly expenses.

ADVERTISE YOUR BUSINESS

Write for particulars about our cuts and ads. from 50 cents up. To advertise in newspapers. Catchy ideas to catch business. Given to one merchant in a town. Send us your ads. and we will criticise them free. WRITE TO-DAY.

GEO. J. SMITH BUREAU, 621 BROADWAY, N. Y.

WE WRITE ADS. IN FRENCH.

**TORONTO'S QUICK AND SURE PRINTERS**

We do all kinds of good printing cheap. Let us handle your next order and you will be satisfied. Latest styles in Type and Borders. Everything up to date.

1,000 LINEN LETTERHEADS THIS MONTH, \$2.50.

G. A. Weese & Son, 44 Yonge St., Toronto.

PLENTY OF LIGHT ATTRACTS ATTENTION TO A STORE.

THE AUER GASOLINE LAMP GIVES 100 CANDLE POWER at a cost of 7c. a week.

Beats gas, electricity, or coal oil.
Satisfaction guaranteed. Catalogue on request.

AUER LIGHT CO., - MONTREAL,
Sole Makers.

NEW TELEPHONE LINE

A new copper metallic line has just been completed from Simcoe to Port Rowan. The towns listed below can now be reached from Toronto at the following rates:

PORT ROWAN	-	50c.
ST. WILLIAMS	-	50c.
VITTORIA	-	40c.

The Bell Telephone Co. of Canada

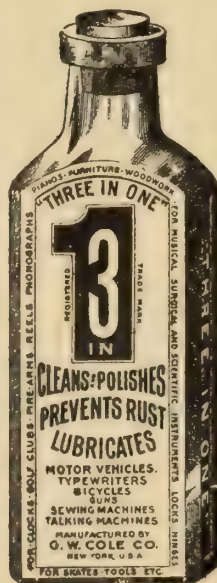
It's Free to Business Men

Our latest illustrated catalogue sent free upon request. Telling you how you can save 10 to 60 hours per month in rendering your accounts and doing your book-keeping. Render 1,000 accounts in one-half hour. Write to-day.

The Briggs Ledger System Co.,
Limited

75 York St., - Toronto, Can.

3 in One



Oilright for delicate mechanism, guns, bicycles, etc. "3 in 1" is the ideal lubricant for all oiling purposes. Will not gum, thicken, turn rancid or collect dust. Cleans and polishes and positively prevents rust on metal surfaces in any climate or in any kind of weather, better than furniture polish for veneered and varnished surfaces. Sold by all the leading jobbers in Canada.

G. W. COLE CO.

141 Washington Life Bldg., New York.

**A DISTINCT TYPE**

The **OLIVER** has certain superior features and unique improvements exclusively its own.

The
OLIVER
Typewriter

The Standard VISIBLE Writer.

Operates as smoothly as the delicate mechanism of a watch, durability unquestioned.

Works in a Whisper

Art Catalogue Free.

THE CANADIAN OLIVER TYPEWRITER CO.

183a St. James St.
MONTREAL.

Agents wanted in all unoccupied territory.

Write for our Great Special Offer.

CABLE FROM LONDON.

London, May, 27, 1904.

British Government to-day ordered fifty more Oliver Typewriters.

LONDON.

BAD BREAKS IN BUSINESS.

From The Saturday Evening Post.

AN illustration of the results of allowing an employe to monopolize information comes to my recollection in connection with a large wholesale drug house. In this business, as in several others, prices on a large variety of goods are subject of daily fluctuation. Therefore "pricers" are employed to each day figure the prices to be charged for certain commodities, in accordance with the law of supply and demand and other significant considerations. This is not the simple task which it might seem, for a certain ingredient of a compounded drug may suddenly become scarce while another will depreciate in value.

One day the chief pricer of a large house left on a vacation. When he returned at the end of two weeks he carefully examined the prices made by his assistant. The figures, which he showed with considerable pride to the head of the house, demonstrated that through his absence for twelve days the house had lost \$1,500 because the prices had not been figured from all the data that should have been taken into consideration by the pricers. It did not occur to him that by the same token he convicted himself of a failure so to systemize his work and record vital data that another might take up his work without serious loss to the establishment. Judged on his own figures for the one week, this loss would in a year have amounted to about \$35,000.

Another serious "break" in business is the failure systematically to keep vigilance upon the comparative amounts of trade done by a customer during different periods. When a customer who is in the habit, for example, of ordering five bags of coffee orders only one, there is but one conclusion to be drawn from the viewpoint of the house; he is dividing his coffee trade with another firm. Certainly the only safe thing for the house to do is to draw this inference. Under a thorough system this deviation from the habit of the customer would be instantly noticed, and he would be written a letter politely inquiring if anything unsatisfactory in the previous treatment he had received from the establishment was responsible for the falling-off in the amount of his order.

When the management of a large commercial house is not alive to the fact that the office end of the business should be a positive trade-producing factor, he is in one of the business errors that will cut deeply into his profits if he is not in the enjoyment of a monopoly. It is a poor office that is not a close second to the salesmen's department as an actual trade-getting factor.

Often some decidedly fantastic complications are brought about in the order department, owing to a lack of proper method. In a very large wholesale house a telegram from a distant customer was received which read: "Duplicate our order No. 865." A few days later a letter from the same customer again instructed the duplication of the order bearing that number. While this second order was being filled the buyer from the firm in question arrived in the city, went to the wholesale house, and among other purchases duplicated the items in "order 865."

Several days later the distant customer was heard from with emphasis, frantically asking why the house had shipped three times the amount of each kind of merchandise that had been ordered. Of course, the explanation of the matter was very simple. The letter was intended as a confirmation of the telegram, not as a new

order. Then the house of the customer had failed to notify its buyer in the market that a sudden demand for goods which were on his "buying list" had made it necessary for them to be ordered by wire. The buyer had made several stops on his way to the city and was in ignorance of the fact that these goods had already been bought. Had this whole transaction been properly made the buyer in the market would have been advised by wire that the order had been telegraphed to the house; the letter to the house would have read: "Confirming our telegram of November 10," etc.; then the buyer would have found a similar letter of confirmation from his own house awaiting him at the wholesale house.

WE NEVER ACCEPT DRAFTS ?

Editor Dry Goods Review.

THERE are two sides to every question, and the draft is no exception. I have read articles or letters in your valuable paper on this subject at different times, but always on one side. I now say a word for the other side. Granting that some men use this draft question as stated, others only do it in self defence and on the soundest of business principles. Where there is no branch of any bank, and a merchant has to remit his money away by mail, he is keeping his accounts with each house he deals with. They don't all draw on him. He may not be able to meet all his bills at thirty days. Why should he sign a draft acceptance which, if he failed through miscarriage of the mail to meet, would be protested, thus proving expensive and injurious to his credit? The retailer cannot always call in his money just as he wants it. He has to use patience and tact, and sometimes is disappointed then. For years I positively refused to accept drafts, as there was no bank here, and the money had to be remitted anyway, but just as soon as a bank was opened here, so that I could be sure of myself, I opened an account with them, and would rather accept drafts than not. We all have our difficulties to overcome in business, and our wholesale friends must bear their share, just as we retailers bear ours, possessing our souls in patience. A.B.C.

CERTIFIED BALANCE SHEETS.

By H. G. St. C. Well.

I KNOW of some cases in which business men have their books examined every six months, and send a copy of their condensed balance sheet to the mercantile agencies. This balance sheet is certified to by the auditor.

Credit is worth a good deal. It is worth possessing. It may easily be created by that means; and to have one's books audited regularly should be thought of as an expense similar to insurance, rent, light and heat; in other words, a wise and necessary outlay. A detailed audit of the books is not necessary for credit purposes.

Not one of you will doubt the desirability of having before you an examined balance sheet, but the question you will raise is one of practical importance—how shall we secure such information?

Traders will refuse to have it done, on the ground of expense alone, if for no other reason. They will refuse to allow you to have their books examined from fear that you will learn too much about their business.

No secret of a business is given away by the experts. The report would be made to the man who employs the company. Accompanying the report would be a balance sheet condensed, and in the reading of which no information not necessary to the purpose would be shown. The trader or manufacturer could use it for credit purposes if he chose.

SHUTTING OFF STEAM.

"Shall we stop our advertising for a while now?"

This is a question that some business men are apt to ask themselves, particularly in the Summer, or during what they regard as their dull season.

Suppose your engineer asked you:

"Shall I stop putting coals on my fires, Sir?"

What would you reply?

"Why, no—unless you want the engine to stop!"

The advertiser who thinks of discontinuing may argue—"We have been advertising so long and so steadily that our name and specialties are well known, and we intend to advertise again when business is better in our

line than it appears to be now; in the meantime our business won't stop."

No; neither will the engines stop the minute the men suspend shovelling in coal. The point is, however, that when the engine is to be started again, ten times as much will have been lost in power as has been saved in fuel or feed.

Using up reserve force never pays.

It is a loss, however it may be looked at. The buying public is prone to forget. It is, moreover, much more difficult and much more expensive to regain a lost customer than to prevent his straying away. — Money Maker Magazine.

This list is for the purpose of placing retailers, manufacturers' jobbers and other readers in touch with reliable and competent accountants and auditors whose services are so frequently required for such purposes as opening books,

Leading Canadian Accountants and Auditors

adjusting and auditing accounts, arranging partnerships or organizing joint stock companies, devising special office systems, making collections and investigations, handling estates, making valuations, etc.

DAVID HOSKINS, F.C.A.

Chartered Accountant,
Auditor,
Financial Valuator.

207 Manning Chambers, City Hall Sq.,
Toronto, Canada.

Cable Address: "Wigwam."

T. G. WILLIAMSON,
Chartered Accountant and Auditor,
15 Toronto St., Toronto, Canada.

F. H. KIDD,
Chartered Accountant, Auditor,
Assignee, Etc.
505 McKinnon Bldg., - Toronto.

JENKINS & HARDY,
Assignees, Chartered Accountants,
Estate and Fire Insurance Agents.
15½ Toronto Street - Toronto.
485 Temple Building, Montreal.
100 William Street, New York.

This space \$15 a year.

HENRY BARBER & CO.,
Accountants and Assignees.

Offices:
18 Wellington St. E., - Toronto, Ont.

WILLIAM FAHEY,
Accountant and Auditor.
462 McKinnon Building, Toronto.

This space \$15 a year.

GEO. O. MERSON,

Chartered Accountant,
Auditor, Assignee, etc.

Regular and Special Audits.

27 Wellington St. E.,
'Phone Main 4744. Toronto.

This space \$15 a year.

This list is for the purpose of placing manufacturers, wholesale and retail merchants and other readers throughout Canada, and firms abroad doing business in Canada, in touch with the legal profession throughout the Dominion, for the collection of accounts, legal representation,

LEGAL CARDS.

organization of companies, the arrangement or dissolution of partnerships, or assignments, as well as all other matters of a legal nature.

For advertising rates apply to MacLean Publishing Co., Limited, Montreal or Toronto.

BEATTY, BLACKSTOCK, FASKEN
& RIDDELL,

PEATTY, BLACKSTOCK, CHAD-
WICK & GALT,

Barristers, Solicitors, Notaries, Etc.

Offices, Bank of Toronto.

Tel., Main 3818. Toronto, Ont.

JAS. H. BURRITT, K.C.
Solicitor, Notary, Etc.

Pembroke, - - - Ont.

D. O. CAMERON, Barrister.
Equity Chambers, - Toronto.

Branch Office, Oakville, Ont.

I. L. O. VIDAL.

Barrister, Solicitor, etc. Collections
and Commercial Law.
Montmagny and Quebec City, Que.

TUPPER, PHIPPEN & TUPPER,
Barristers, Solicitors, Etc.

Winnipeg, - - - Canada.

J. C. HAMILTON, LL.B.,
Barrister, Solicitor and Notary.
McKinnon Building, Toronto.

'Phone, Main 65.

ATWATER, DUCLOS & CHAUVIN

Advocates. Montreal.

Albert W. Atwater, Q. C., Consulting
Counsel for City of Montreal. Chas.
A. Duclos. Henry N. Chauvin.

Educational Department.

The following institutions for the education of business men's sons and daughters are recommended by this paper:

LEARN TO ADVERTISE YOUR STORE

or if you have not time yourself, pay for a course for one of your bright clerks. Get booklet on our specialized course in advertising. Tells about our new method of advertising study.

SEPARATE COURSE FOR EACH LINE OF BUSINESS

Our method is absolutely new and practicable. It tells you all there is to learn about advertising your particular goods.

GOOD ADVERTISING IS TO-DAY THE BASIS OF SUCCESS

Begin now; take our course of study and learn to advertise your store. We look after your advs. while you take your course. Send for our booklet.

CANADIAN CORRESPONDENCE COLLEGE, Limited

Phone Main 4302

161 Bay St., TORONTO

Western Business College

Cor. College and
Spadina avenue, **TORONTO.**

Thorough courses in Bookkeeping, Stenography, Typewriting
and Penmanship; individual instruction.

A. J. HOARE, Principal.

St. Margaret's College, Toronto

A Boarding and Day School for Girls.
Thorough courses in every department.
Only teachers of the highest academical and professional standing employed.

GEORGE DICKSON, M.A.,
Director.

MRS. GEORGE DICKSON
Lady Principal.

FREE COLLEGE COURSE

to one young man in
your town.
Is it you?
Open summer and winter.
Write
R. A. Farquharson, B.A.
Dep. A.

METROPOLITAN
Business College
- OTTAWA, ONT. -

1889.

The Belleville Business College, Limited.

Business firms get the best results by applying to us 10 days before vacancies occur in their employ.

See Catalogue pages 21, 27, 33, 41.

J. A. Tousaw, }
Secretary.

BELLEVILLE,
ONTARIO.

{ J. Frith Jeffers, M.A.,
President.

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.	
1-lb. tins, pure.	
Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French	0 06
Marine black	0 10
Chrome green	0 13
French permanent green	0 13
Signwriters' black	0 15
COLORS DRY.	
Pure in bbls., per cwt. Less than this quantity 3c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	2 75
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	3 00
umber	6 00
Raw umber	12 00
Drop black	0 18
Chrome yellow	5 50
Chrome greens	0 09
French green	2 75
Golden ochre	7 00
Ultramarine blue, in 28-lb. bbs.	1 00
Fire proof mineral	1 00
Genuine Eng. Litharge	1 00
Mortar color	0 45
Pure Indian red, lb.	0 45
Whiting, bbl	0 65
English vermilion in 30-lb. bbs.	0 85

WHITE LEAD. Per 100 lb.	
Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorator's Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.	
Genuine, 560 lb. casks, per cwt	\$4 25
Genuine, 100 lb. kegs.	4 75
No. 1, 560 lb. casks, per cwt	4 00
No. 1, 100 lb. kegs, per cwt	4 25

WHITE ZINC.	
Extra Red Seal	0 06
French V. M.	0 06
Lehigh	0 06

DRY WHITE LEAD.	
Pure, casks	4 25
Pure, kegs.	4 50
No. 1, casks	4 00
No. 1, kegs.	4 25

PREPARED PAINTS.	
In ½, 1 and 1-gallon tins.	
Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
"British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose.	1 85
25-lb. tins.	1 80
12½ lb. tins.	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots. Per gal. Net.		
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
No. 1 brown japan	1 50	1 60
Gold size, japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
"No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Damar	1 75	2 00
Shellac, white	2 40	2 50
"orange	2 30	2 40
Furpentine, brown japan	1 10	1 20
"black japan	1 10	1 20
"No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granitine floor finish, per gal.	2 75	
Maple Leaf coach enamels; size 1,	\$1.20	
size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish, assorted		
case, from	1 gal., \$2.50.	

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Strip	0 18	0 20
Coopers	0 19	0 20
Huttner		
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 40 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 5 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 10 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

per lb.	
Best thick brown or grey felt wads, in ½-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.	
AXES.	
Chopping Axes	
Single bit, per doz.	7 00 10 00
Double bit, " "	10 00 18 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters' Axes	5 50 6 00
Boys' Axes	6 25 7 00
Splitting Axes	7 00 12 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys', handled	5 75
"hunters"	5 25
Underhill American Bench Axes, 40 p.c.	
AXLE GREASE	
Ordinary, per gross	6 00 7 00
Best quality	10 00 12 00

BELLS.

Hand.	
Brass, 60 per cent.	
Nickel, 55 per cent.	
American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

DOOR.

Gongs, Sargent's	5 50 8 00
"Peterboro", discount 50 and 10 per cent. off new list.	
Farm.	
American, each	1 25 3 00
House.	
American, per lb.	0 35 0 40

BELLOWS.

Hand, per doz.	3 35 4 75
Moulders', per doz.	7 50 10 00
Blacksmiths', discount 49 per cent.	

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	
Agricultural, not wider than 4 in., 75 per cent.	

BITTS.

Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.

Gilmour's, 47½ per cent.	
Expansive.	
Clark's, 40 per cent.	

Gimlet.

Clark's, per doz.	0 65 0 90
Diamond, Shell, per doz.	1 00 1 50
Nail and Spike, per gross.	2 25 5 20

BLIND AND RED-STAPLES.

All sizes, per lb.	0 07½ 0 12
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BOLTS AND NUTS.

Per cent.	
Carriage Bolts, common (\$1 list)	
" " 3-16 and ½	60 and 10
" " 5-16 and ¾	55 and 5
" " 7-16 and 1	55 and 5
" " full sq. (\$2.40 list)	60
" " Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ¾ and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., ¼ to 1	

BOOT CALKS.

Small and medium, ball	per M. 4 25
Small heel	" 4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.	
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BUTCHERS' CLEAVERS.

German	per doz. 6 00
American	" 12 00

BUTCHER KNIVES.

Bailey's	per doz. 0 60 6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll	1 15
Carpet Felt	per ton 13 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 600 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Roof	small packages 0 25
Refined Tar	per barrel 5 00
Coal Tar	per gal. 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 10

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.9	or 2-inch.
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BUTTS.

Wrought Brass, net revised list.	
Cast Iron.	
Loose Pin, discount 60 per cent	
Wrought Steel.	
Fast Joint, discount 65, 10 and 2½ per cent.	
Loose Pin, discount 65, 10 and 2½ per cent.	
Berlin Bronzed, discount 70, 70 and 5 per cent.	
Gen. B ronzed	per pair 0 40 0 65

CARPET STRETCHERS.

American	per doz. 1 00
Bullard's	" 6 50

CANTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross 7 50 8 50
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CHALK.

Carpenters' Colored, per gross	0 45 0 75
White lump	per cwt. 0 60 0 65
Red	" 0 05 0 06
Crayon	per gross 0 14 0 18

CHISELS.

Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS-STOCK.

Colonial Stock Foods, 50c. packages,	
" " " 25c. pkgs.,	per doz \$1 60
" " " 10c.	" 2 00
" " " 25-lb. pail, each	" 75
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz.	1 21
Worm	" 1 25
International 1 Stock Foods, \$1 packages,	
per doz.	8 00
International Stock Foods, per pail	2 75
" " " per bbl.	10 50
" " " ou ltry	\$1 pkgs. 8 00
" " " Worm Powders	50c pkgs. 4 00
" " " Pine Healing Oil, per doz	8 00
" " " Pheno-Chloro	pkgs. per doz 8 00
" " " Hoof Ointment	" 8 00
" " " Compound Absorbent	" 16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.	

CLIPS.

Axle, discount 65 per cent.	
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EASY TO PUT ON HARD TO WEAR OUT

Aptly describes two of the many advantages possessed by Paterson's Wire Edged Ready Roofing, the only popular substitute for Shingles.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.
American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.
Plain or Corrugated.

2-inch	per 100 feet	3 00
3 "	"	4 00
4 "	"	5 25
5 "	"	6 75
6 "	"	9 00

CRADLES, GRAIN.
Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	per pair	0 17½
S. & D., " 5	"	0 22½
S. & D., " 6	"	0 15
Boynton pattern	"	0 20

DOOR SPRINGS.

Torrey's Rod	per doz.	1 75
Coil, 9 to 11 in.	"	0 95
English	"	2 00

DRAW KNIVES.

Cosach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Miller's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.
Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAVETROUGHES.

10-inch per 100 ft. 10 00

ELBOWS (stovepipe.)

5 and 6-inch, common	per doz.	1 20
7-inch	"	1 35
Polished, 15c. per dozen extra.	"	

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western	70 and 10	per cent.
Arcade	70 " 10	"
Kearney & Foot	70 " 10	"
Disston's	70 " 10	"
American	70 " 10	"
J. Barton Smith	70 " 10	"
McClellan	70 " 10	"
Eagle	70 " 10	"
Nicholson, 60 and 10 to 60, 10 and 5	"	"
Royal	70 to 75	"
Globe	70 to 75	"
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.	"	"
Jowitt's, English list, 25 to 27½ per cent.	"	"
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50	"	"

GLASS.

Window. Box Price.

Size United Inches.	Per 50 ft.	Star 100 ft.	Per 50 ft.	D. Diamond 100 ft.	Per 50 ft.
Under 26	3 80				5 06
26 to 40	4 00				5 44
41 to 50	4 50				6 56
51 to 60	4 75				7 50
61 to 70	5 00				8 62
71 to 80	5 30				9 38
81 to 85					12 75
86 to 90					15 00
91 to 95					18 00
96 to 100					
Discount 15 per cent					

GAUGES.
Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33 each 1 65 2 40
GILLET'S POWDERED LYE.
1-case, \$3.60; 3-case, \$3.50; 5-case and over, \$3.40.

HALTERS.

Rope, ¾-inch	per gross	12 00
Rope, 1-inch	"	9 00
Rope, 1 to 1½-inch	"	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1½ "	"	5 20
Web	"	2 45

HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

Tack.

Magnetic per doz. 1 10 1 20

Sledge.

Canadian per lb. 0 07½ 0 08½

Ball Pean.

English and Canadian, per lb. 0 22 0 25

HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00

Store door per doz. 1 00 1 50

Fork.

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

American per doz. 1 00 1 25

Plane.

American per gross 3 15 3 75

Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

Steel barn door	doz. pairs.	8 00
Stearns, 4-inch	"	10 00
" 5-inch	"	4 50
Zenith	"	6 00
Lare's covered—	"	9 00
No. 11, 5-foot run	"	8 40
No. 11½, 10-foot run	"	10 80
No. 12, 10-foot run	"	12 60
No. 14, 15-foot run	"	21 00
Steel, covered	"	4 00
" track, 1 x 3-16 in (100 ft.)	"	11 00
" " 1½ x 3-16 in (100 ft.)	"	3 75
" " 1½ x 3-16 in (100 ft.)	"	4 75

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.

Shingle, Red Ridge 1, per doz. 4 40

Barrel, Underhill, 2, per doz. 4 85

Barrel, Underhill, 5 00

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½

" " 5-in., " 0 06½

" " 6-in., " 0 06

" " 8-in., " 0 05½

" " 10-in., " 0 05½

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in. per 100 lb. 4 50

12 in. up. 3 25

Spring, No. 20, per gro. pairs 10 50

HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter, 9-in., per doz. 4 00 4 50

HOLLOW WARE.

Tinned cast, 35 per cent.

HOOKS.

Cast Iron.

Bird cage per doz. 0 50 1 10

Clothes line, No. 61. " 0 00 0 70
Harness " 0 60 12 00
Hat and coat per gro. 1 10 10 00
Chandelier per doz. 0 50 1 00

Wrought Iron.

Wrought hooks and staples Canadian discount 60 per cent.

Wire.

Hat and coat, discount 60 per cent.

Belt per 1,000 0 60

Screw, bright, discount 60 per cent.

HORSE NAILS.

"C" brand, 40, 10 and 7½ per cent. off list { Oval head

"M" brand, 55, per cent. { head

Countersunk, 57½ per cent.

"Monarch," 50 and 7½ per cent.

"Peerless" 50 per cent. dis.

HORSESHOES.

F.O.B. Montreal

Iron Shoes.

Light, medium and heavy 3 65 3 90

Snow shoes 3 90 4 15

Steel Shoes.

XL, sizes 1 to 5 5 35

Light, No. 2 and larger 3 80

No. 1 and smaller 4 05

Featherweight, all sizes 0 to 4 5 35

Toeweight, all sizes 1 to 4 6 60

JAPANNED WARE.

Discount 50 per cent.

ICE PICKS.

Star per doz. 00 3 25

KETTLES.

Brass spun 7½ per cent. discount off new list.

Copper per lb. 0 30 0 50

American, 60 and 10 to 65 and 5 per cent.

KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,

American per gross 0 60

KNOBES.

Door, japanned and N.P., per

doz. 1 50 2 50

Bronze, Berlin per doz. 2 75 3 25

Bronze, Genuine " 6 00 9 00

Shutter, porcelain, F. & L.

screw per gross 1 30 00

White door knobs per doz. 2 00

HAY KNIVES.

Net prices.

LAMP WICKS.

Discount, 60 per cent.

LANTERNS.

Cold Blast per doz. 7 00

No. 3, "Wright's" " 8 50

Ordinary, with O burner " 4 00

Dashboard, cold blast " 9 00

No. 0 " 5 75

Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.

Porcelain lined per doz. 2 20 5 60

Galvanized " 1 87 3 85

King, wood " 2 75 2 90

King, glass " 4 00 4 50

All glass " 0 50 0 90

LINES.

Fish per gross 1 05 2 50

Chalk " 1 90 7 40

LAWN MOWERS.

Woodyatt, 10½-in. wheel, 14-in. cut 8 50

Star, 9-in. " 7 00

Daisy, 8-in. " (net) 2 87½

Philadelphia, 7½-in. " 7 00

Ontario, 7½-in. " 15 80

King Edw'd, 12-in. " 9 50

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:

10½-in. high wheel 7 50 10 00

9-in. " 5 50 6 25

8-in. " 4 90 5 50

Discount 50 per cent.

LOCKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwin per doz.

Cabinet.
Eagle, discount 30 per cent.

Padlocks.
English and Am. per doz. 0 50 6 00
Eagle, discount 20 to 25 per cent.

MACHINE SCREWS.

Iron and Brass.

Flat head, discount 25 per cent.

Round head, discount 20 per cent.

MALLETS.

Tinsmiths' per doz. 1 25 1 50

Carpenters' hickory, " 1 25 3 75

Lignum Vitae, " 3 85 5 00

Caulking, each 0 60 2 00

MATTOCKS.

Canadian per doz. 5 50 6 00

MEAT CUTTERS.

American, discount 3½ per cent.

German, 15 per cen

Gem per each 1 15

MILK CAN TRIMMING.

Discount 25 per cent.

NAILS. Cut. Wire.

2d and 3d 3 30 3 45

3d 2 95 3 12

4 and 5d 2 70 2 95

6 and 7d 2 60 2 80

8 and 9d 2 45 2 60

10 and 12d 2 40 2 55

16 and 20d. 2 35 2 50

30, 40, 50 and 60d (base) 2 30 2 45

Cut nails in carlots 5c. less.

Wire nails in carlots are \$2.40.

Steel cut nails 10c. extra.

Miscellaneous wire nails, discount 75 per cent.

Coopers' nails, discount 30 per cent.

NAIL PULLERS.

German and American 1 75 2 50

NAIL SETS.

Square, round and octagon,

per gross 3 38

Diamond 1 00

Remington Raises Records

The new C.E.O. Trap Gun established the five-man squad world's records—1454-1500 clay targets, 97 per cent., in three consecutive days.

Do you care for record-breaking scores? The new Remington C.E.O. gun, listing at \$95.00, is a revelation to those who have been used to old-style guns.

ILLUSTRATED CATALOGUE FREE

REMINGTON ARMS CO., ILION, N.Y.

Agency: 315 Broadway, New York City.

Depot: 86-88 First St., San Francisco, Cal.

PLANE IRONS.			SAP SPOUTS.			STAPLES.			ENAMELLED WARE.		
English	per doz.	2 00	5 00	Bronzed iron with hooks	per 1,000	7 50	Galvanized	3 00	White, Princess, Turquoise, Blue and White	discount 50 per cent.	
PLIERS AND NIPPERS.				"Eureka" tinned steel, hooks	"	8 00	Plain	2 80	Diamond, Famous, Premier, discount 50 and		
Button's genuine, per doz. pairs, discount				SAWS.			Poultry netting staples, discount 40 per cent.				
37½ to 40 per cent.				Hand, Disston's, discount 12½ per cent			STOCKS AND DIES.				
Button's imitation	per doz.	5 00	9 00	S. & D., discount 40 per cent.			American discount 25 per cent.				
German	"	0 60	60	Crosscut, Disston's, per foot	0 35	0 55	STONE.				
PRESSED SPIKES.				S. & D., discount 35 per cent. on Nos. 2 and 3.			Washita	per lb.	0 28	0 50	
Discount 20 per cent.				Hack, complete, each	0 75	2 75	Hindostan	"	0 06	0 07	
PULLEYS.				" frame only, each	0 50	1 25	Labrador	slip	0 09	0 09	
Hothouse	per doz.	0 55	1 00	SASH WEIGHTS.			"	"	0 13	0 15	
Axle	"	0 22	0 33	Sectional, per 100 lb.	2 00	2 25	"	"	0 30	0 30	
Screw	"	0 27	1 00	Solid	1 50	1 75	Turkey	"	1 50	1 50	
Awning	"	0 35	2 50	SASH CORD.			Arkansas	"	0 10	0 10	
PUMPS.				Per lb.	0 28	0 30	Water-of-Ayr	"	3 50	5 00	
Canadian cistern	1 80	3 60		SAW SETS.			Grind, 2-in., 40 to 200 lb., per ton	25 00			
Canadian pitcher spout	1 40	2 10		Lincoln and Whiting	per doz.	4 75	" under 40 lb.,	28 00			
PUNCHES.				Hand Sets, Perfect	4 00		" under 2 in. thick,	29 00			
Saddler's	per doz.	1 00	1 85	X-Cut Sets,	7 50		STOVEPIPES.				
Conductor's	"	3 00	15 00	SCALES.			5 and 6 inch, per 100 lengths	7 00			
Pinner's, solid,	perset	0 72		Gurney Standard, 40 per cent.			7 inch.	7 50			
" hollow,	per inch	1 00		Gurney Champion, 50 per cent.			ENAMELLED STOVE POLISH.				
RAKES.				Burrow, Stewart & Milne—			No. 4, 3 doz. in case, net cash	4 80			
Wood,	per doz. net	1 20	up	Imperial Standard, discount 40 per cent.			No. 6, 3 doz. in case,	8 40			
RAZORS.				Weight Beams, discount 35 per cent.			TACKS, BRADS, ETC.				
Elliot's	per doz.	4 00	18 00	Champion Scales, discount 50 per cent.			Carpet tacks, blued	80 and 15			
Geo. Butler's & Co.'s	"	4 00	18 00	" Dominion, discount 55 per cent.			" " tinned,	80 and 20			
Boker's	"	7 50	11 00	Richelleu, discount 55 per cent.			" (in kegs),	40			
" King Cutter	"	12 50	15 00	Warren's new Standard, discount 40 per cent.			Cut tacks, blued, in dozens only	80			
Wade & Butcher's	"	3 60	10 00	" Champion, discount 50 per cent.			" 1 weights	60			
Theile & Quack's	"	7 00	12 00	" Weightbeams, discount 35 per cent.			Swedes cut tacks, blued and tinned	80 and 10			
Carbo Magnetic	"	15 00		SCREW DRIVERS.			In dozens	75			
Griffon Barber's Favorite	"	10 75		Sargent's	per doz.	0 65	1 00	Swedes, upholsterers', bulk,	85, 12½ and 12½		
Griffon No. 65	"	13 00		SCREEN DOORS.			" brush, blued and tinned	70			
Griffon Safety Razors	"	13 50		Common doors, 2 or 3 panel, walnut			Swedes, gimp, blued, tinned and	75 and 12½			
Griffon Strapping Machines	"	13 50		stained, 4-in. style	per doz.	6 50	Zinc tacks, in papers	35			
Lewis Bros "Klean Kutter"	"	8 50	10 50	Common doors, 2 or 3 panel, yellow and			Leather carpet tacks	55			
REGISTERS.				green stained, 4-in. style	per doz.	6 75	Copper tacks	50			
Discount 40 per cent.				Common doors, 2 or 3 panel, in natural			Copper nails	52½			
RIVETS AND BURKS.				colors, oil finish	per doz.	8 75	Trunk nails, black	65 and 5			
Iron Rivets, black and tinned, discount 60 and				3-in. style 20c. per dozen less.			Trunk nails, tinned	65 and 10			
10 per cent.				SCREWS.			Clout nails, blued	65 and 5			
Iron Burrs, discount 55 per cent.				Wood, F. H., bright and steel, discount 87½			Chair nails	35			
Extras on Iron Rivets in 1-lb. cartons, ½c.				per cent.			Patent brads	40			
per lb.				Wood, R. H., bright, dis. 82½ per cent.			Fine finishing	40			
Extras on Iron Rivets in ½-lb. cartons, 1c.				" F. H., brass, dis. 80 per cent.			Lining tacks, in papers	10			
per lb.				" R. H., dis. 75 per cent.			" in bulk	15			
Copper Rivets, with usual proportion burrs, 45				" F. H., bronze, dis. 75 per cent.			" solid heads, in bulk	75			
per cent. discount. Cartons, 1c. per lb.				" R. H., dis. 70 per cent.			Saddle nails, in papers	10			
extra, net.				Drive Screws, dis. 87½ per cent.			" in bulk	15			
Copper Burrs only, discount 30 and 10 per cent.				Bench, wood	per doz.	3 25	4 00	Tufting buttons, 22 line, in doz-			
Extras on Tinned or Coppered Rivets, ½-lb.				" iron	"	4 25	5 00	ens only	60		
cartons, 1c. per lb.				Set, case hardened, dis. 60 per cent.				Zinc glaziers' points	5		
RIVET SETS.				Square Cap, dis. 50 and 5 per cent.				Double pointed tacks, papers	90 and 10		
Canadian, discount 35 to 37½ per cent.				Hexagon Cap, dis. 45 per cent.				Clinch and duck rivets	45		
ROPE, ETC.				SCYTHES.				TAPES LINES.			
Sisal	0 11½			Per doz. net	6 00	9 00		English, ass skin	per doz.	2 75	5 00
Pure Manila	0 14½			SCYTHE SNATHS.				English, Patent Leather	"	5 50	9 75
"British" Manila	0 12			Canadian, discount 40 per cent.				Chesterman's	each	0 90	2 85
Cotton, 3-16 inch and larger	0 20½	0 22		SHEARS.				" steel	each	0 80	8 00
" 5-32 inch	0 25	0 27		Bailey Cutlery Co., full nickeled, discou				TINNERS' SNIPS.			
" 1 inch	0 25	0 28		and 2½ per cent.				Per doz.	3 00	15 00	
Russia Deep Sea	0 16			Bailey Cutlery, Japan Handles, discount 67½				THERMOMETERS.			
Jute	0 09			per cent.				"Tin case and dairy, discount 75 to 75 and 10			
Lath Yarn, single	0 10			Seymour's, discount 50 and 10 per cent.				TRAPS (steel.)			
" double	0 10½			SHOVELS AND SPADES.				Game, Newhouse, discount 25 per cent.			
Sisal bed cord, 48 feet	per doz.	0 65		Canadian, discount 45 per cent.				Game, H. & N., P. S. & W., 65 per cent.			
" 60 feet	"	0 80		Cast iron, 16 x 24	0 85			Game, steel, 72½, 75 per cent.			
" 72 feet	"	0 95		" 18 x 30	1 00			TROWELS.			
RULES.				" 18 x 36	1 40			Disston's, discount 10 per cent.			
Boxwood, discount 55 per cent.				SNAPS.				German	per doz.	4 75	6 00
Ivory, discount 37½ to 40 per cent.				Harness, German, discount 25 per cent.				S. & D., discount 35 per cent.			
SAD IRONS.				Lock, Andrews	4 50	11 50		TWINES.			
Mrs. Potts, No. 55, polished	per set	0 80		SOLDERING IRONS.				Bag, Russian	per lb.	0 27	
No. 50, nickle-plated,	"	0 90		1, 1½-lb.	per lb.	0 37		Wrapping, cotton, 3-ply	"	0 24	
Common, plain, nickle-plated	4 50			2-lb. or over	"	0 34		" 4-ply	"	0 27	
" plated	5 50			Iron, No. 493	per doz.	2 40	2 55	Mattress	per lb.	0 33	0 45
SAND AND EMERY PAPER.				No. 494	"	3 25	3 40	Staging	"	0 27	0 35
B. & A. sand, discount, 40 and 5 per cent				SQUARES.				VISES.			
Emery, discount 40 per cent.				Steel, discount 60 to 60 and 5 per cent.				Wright's	"	0 13½	
Carbet (Rutten's) 5 to 10 per cent. advance				Try and Bevel, discount 50 to 52½ per cent.				Brook's	"	0 12½	
on list.				STAMPED WARE.				Pipe Vise, Hinge, No. 1	"	3 50	
				Plain, discount 75 and 12½ per cent. off re-				" No. 2	"	5 50	
				vised list.				Saw Vise	"	4 50	9 00
				Retinned, discount 75 per cent. off revised list.				Columbia Hardware Co.			
								Blacksmiths (discount) 60 per cent.			
								parallel (discount) 45 per cent.			

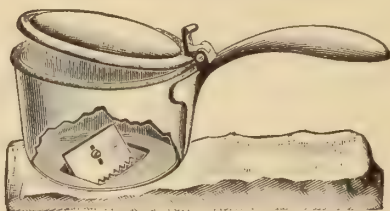
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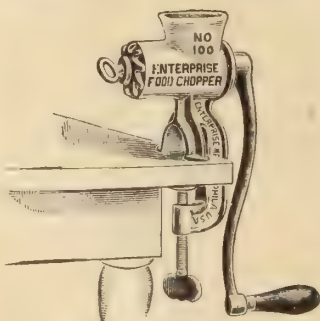
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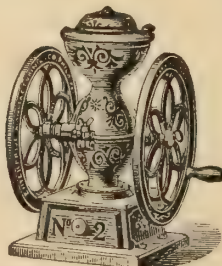


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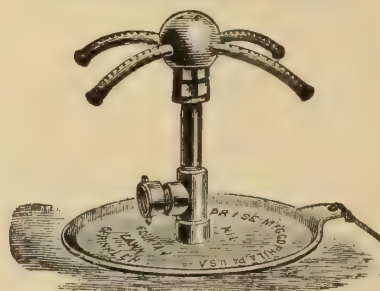


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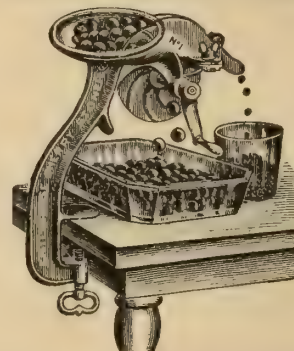
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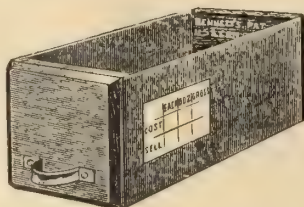


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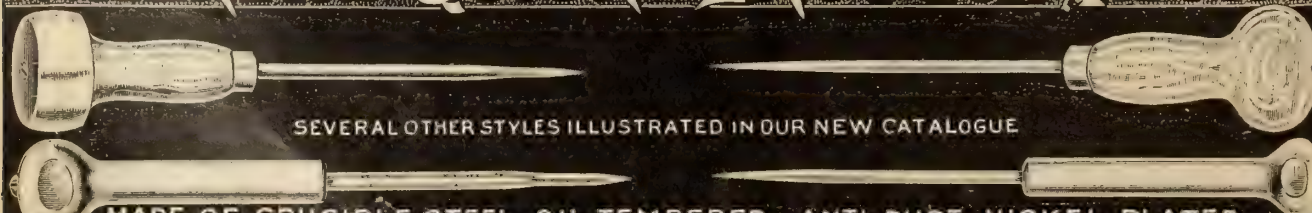
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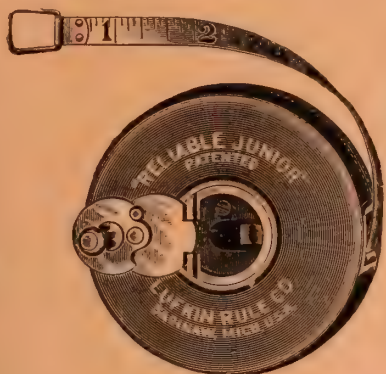
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HARDWARE^{AND}METAL

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A Weekly Newspaper devoted to the Hardware, Metal, Machinery,
Heating and Plumbing Trades in Canada.

VOL. I.

TORONTO, JULY 21, 1904.

NO. 1

National Master Plumbers' Association of Canada.

Report of the Ninth Annual Convention of the National Association of Master Plumbers,
Steam and Gas Fitters of Canada.

WITH an enthusiasm never surpassed in any of the eight successful conventions held by the National Master Plumbers' Association, the ninth annual convention of the body was opened by President Joseph Thibeault, of Montreal. The first day's proceedings, right up to the singing of Auld Lang Syne at the close of the banquet, were carried out in the same spirit.

When at ten o'clock Wednesday morning President Thibeault opened the first session of the convention, there were present many of the stalwarts who have from the inception of the associational idea given of their time and energy, of their executive ability and their moral courage to a movement which already has attained a force that a few years ago was deemed impossible.

At the president's right one would have noticed William Mansell and W. H. Meredith, who, through their work in the Toronto association and their influence in every associational movement, have done much to strengthen and organize the craft. Nearby, too, was the active veteran from London, William Smith, whose vigor and wise counsel meant so much to the body in its earlier years. At the secretary's desk was H. A. Knox, of Ottawa, who has imported life and activity into the movement in recent years, while his fellow townsman, John McKinlay, one of the steady-thinking members, was to one side. On the left Wm. Watson, of Moncton, and George Kinsman, of Halifax, the official representatives from Nova Scotia, were accompanied by James Farquharson and James G. Crump. Harry Mahoney, of Guelph, the jovial Irishman, and W. G.

A MESSAGE FROM SECRETARY KNOX.

The meeting for the ninth year of the master plumbers of the Dominion certainly signifies that their calling is a potential factor in contributing to the comfort and weal of the people. Quackery in their profession is unknown, where lines governing sanitation are enforced. In such places the cause of the improvement is the judicious influence of the Master Plumbers' Association. Health, wealth and prosperity are the essential planks in the platforms of the rival political parties. Conviction must then allow the marvelous power for good and the equally marvelous power for evil the plumber is entrusted with. Happy is the being, when the organic functions of digestion, nutrition, expulsion are properly performed, to know that continuance will see old age by the arrangement on natural lines of fixtures designed to carry off solid and atmospheric impurities. The prairie, forest and mine are the elemental resources of the country. The plumber may with truth be termed the physical resource. The public should go to him for advice and assistance and thus will save the grist from the doctor's mill and enjoy life.

H. A. KNOX,
Secretary N. A. M. P.

Butler, of Perth, the quiet but well-posted, were in their usual places.

Two new delegates, A. J. Hammond and Charles Plaxton, of Winnipeg, were given a royal welcome, especially as they bore tidings of a movement toward better organization in Winnipeg, and possibly in other points in the west.

The Montreal delegation which accompanied President Thibeault was made up of high-grade men. In W. R. J. Hughes the association found a new delegate, a worthy son of one of the most respected members of the craft in the Dominion, J. W. Hughes. A namesake and distant relative of the Premier, in the person of Joseph Laurier, together with Thomas Moll, J. A. Gordon and Frank Bonhomme, made a strong team from the metropolis of the Dominion.

The Toronto delegation, under the leadership of Vice-President Geo. Cooper and Fred Armstrong, was representative of the entire plumbing trade in that city.

THE PRESIDENT'S WELCOME.

Under such conditions it was natural, therefore, that President Thibeault, in his opening remarks, should express keen satisfaction at the interest shown in the associational work, as evidenced by the large attendance of representative plumbers. The president also expressed appreciation of the preparations for the comfort and convenience of delegates, and for the work of the convention. He felt that the trade had awakened to the fact that the association was formed not merely to cause better relations between the different branches of the trade, but also for the distinct

betterment of the conditions under which every plumber worked. It had already been proven that organization was the sound, safe method of attaining their desires, and he hoped that the sessions of the present convention would result in further progress along the lines they were following. He hoped every man present would derive pleasure and profit from his stay in Toronto.

John McKinlay, of Ottawa; Joseph Laurier, of Montreal, and Robert Harrison, of Toronto, were chosen as the credential committee, to report Thursday morning.

At the request of the chair, Secretary Meredith announced the programme for Thursday and Friday. He particularly asked a large attendance at the business sessions.

THE CIVIC WELCOME.

By this time the representatives of the Municipality of Toronto, Acting-Mayor Chisholm and Ald. Ramsden, had arrived to officially welcome the delegation to the city. They were introduced by that prince of jolliers, Fred Armstrong, who explained to the president how anxious they were to give the delegates a warm welcome.

With that grace only possible to a French-Canadian, President Thibeault "gave the glad hand" to the delegation. In return Acting-Mayor Chisholm offered "the keys of the city" to the visitors. He welcomed them to the prettiest, cleanest and most attractive city in North America, and trusted to see the convention assembled in Toronto another year.

Ald. Ramsden, chairman of the Reception Committee of the Toronto Council, laughingly explained that the committee had secured a grant to entertain their visitors to a drive around the city, but that Toronto had become so popular as a convention city that the council had notified the committee that this grant was to be the last of the kind. He had heard that the plumbers had a combine, a ring to hold up prices, but when he looked into the innocent, mild-looking men before him he had to conclude the charge was baseless. He gave them the tip that if any of the delegates got into any trouble they should appeal to the mayor, and "it would be all right."

As some members of the executive had not arrived in time for the meeting early that morning, there was no further business, so the president called on speeches from many of the supply houses.

THE SUPPLY MEN'S WELCOME.

Peter McMichael, of the Dominion Radiator Co., as chairman of the supply men's reception committee, added a

cordial welcome to all the delegates and visitors. The supply houses had decided to do everything in their power to give the delegates a royal time. He hoped their actions in the matter would speak louder than any words he could utter would.

J. H. Paterson, of the Toronto Hardware Co.; H. W. Anthes, of the Toronto Foundry Co.; A. A. McMichael, of the James Robertson Co.; W. S. Jackson, of the Ideal Mfg. Co.; E. J. Brewer, of the Gurney Foundry Co.; W. N. Forbes, of Wm. Stairs, Son & Co., Halifax, added their welcome in brief speeches.

TORONTO ASSOCIATION'S WELCOME.

The grand finale in the series of welcomes was that from the Toronto association, hosts of the convention, read by Vice-President Geo. Cooper, as below: "In the absence of President Ross the privilege of welcoming this important body of men to our Queen City has devolved upon me. It has been with considerable pride and satisfaction we have watched the solid and rapid growth of our course since you last have met in the City by the Sea, also in the Royal City, and we now welcome you back to our fair city.

"While it is not our desire to encroach upon the business session of the convention, we earnestly extend to one and all a hearty invitation to enter into the social functions of the occasion, and I express the hope that all may carry away with them pleasant memories of their visit to the city.

"We are glad to meet—will be sorry to part—but we part with the hope of meeting again.

"In closing, allow me to say that I sincerely hope that the business benefits resulting to our craft from the annual gatherings may increase as the years come and go."

After adjournment the executive met in informal session, and other members of the association spent the rest of the morning in talking over former conventions and problems of the day.

DRIVE AROUND THE CITY.

In the afternoon about seventy or eighty visiting and local plumbers were given a drive around the city by the civic authorities. The procession of carriages, each with four handsome plumbers or supply men, attracted general attention. Nothing serious happened en route, except the stop at Rose-dale Hotel, and that was not long enough to be serious.

After the drive the delegates, visitors and local plumbers gathered on the City Hall steps, where, after several plates had been spoiled, an excellent group photo was taken. This will be published in a day or two.

THE BANQUET.

For many years the complimentary banquet tendered by master plumbers and supply houses of Toronto will be remembered by those present. In the first place it was by far the largest yet in point of attendance. Among the delegates present from outside were:

Montreal—President Joseph Thibeault, Joseph Laurier, J. E. Parker, Thomas Moll, Frank Bonhomme, J. E. Parker, and W. R. J. Hughes.

Guelph—Harry Mahoney.

Perth—W. G. Butler.

Barrie—J. H. Neelands.

Halifax—Geo. Kinsman, James Farquharson and James G. Crump.

Winnipeg—Chas. Plaxton and A. J. Hammond.

Ottawa—Secretary H. A. Knox, Treasurer F. G. Johnson and John McKinlay.

London—Wm. Smith, C. F. Needham and E. H. Russell.

The supply houses were represented as follows:

The Gurney Foundry Co., Toronto—Edward Gurney, Cromwell Gurney, T. B. Alcock, E. J. Brewer, W. L. Helliwell and Holt Gurney.

The James Morrison Brass Mfg. Co., Toronto—Chas. E. and Robt. A. Morrison, F. Hadley, F. W. Armstrong and C. M. B. World.

The James Robertson Mfg. Co., Toronto—A. A. McMichael, H. S. Harwood, Geo. McQuillan, W. A. Sheppard, J. R. Foster, J. M. Owston, D. J. Proctor and H. Mole.

Standard Ideal Sanitary Co.—A. D. MacArthur, W. S. Linton and R. Shirreff.

Toronto Foundry Co., Toronto—H. W. and L. L. Anthes.

The Ontario Lead & Wire Co., Toronto—Fred and Arthur Somerville, W. A. Porter, J. F. Dewar and A. C. Ormston.

Toronto Hardware Co.—J. H. Paterson and Geo. H. Gouinlock.

The Borden Co., Warren, O.—R. M. Storer.

Wm. Stairs, Son & Co., Halifax—W. N. Forbes.

The Star Iron Co., Montreal—T. J. Carling.

And, as is usual when a skilful toastmaster is at the head of the board, numbers engendered enthusiasm. For originality and excellence of topical hits the menu card would be hard to surpass, as may be judged from the accompanying reproduction of the first page.

When the cigars were being passed around Chairman Armstrong arose. He was constrained to utter the deep, sincere desire in his heart that those who were honoring the hosts should receive

profit as well as pleasure from the convention to be held; that in the future the receipts of everyone of his co-workers in the business he was so proud to follow would be increased. The plumbers, from the Atlantic Coast to the limits of good plumbing in the west, were a body of men who for brain or brawn would compare with any class in the country. He recognized that each delegate from a distance was making a sacrifice in leaving his business at this season to attend the convention, but he felt it possible that as a result of this sacrifice the trade throughout the Dominion would be uplifted, that the trade would be safeguarded in such a way as to result in the general welfare. (Hear, hear.) The Toronto association was not yet ideal, but everyone in connection with it was proud of it (applause) for the simple reason, if for no other, that every reputable plumber in the city was a member of it.

The Master Plumbers' Association was a mutual benefit association. It had in mind the benefit of every member, fairness to the public and thorough loyalty to those supply men and manufacturers who were fair to its members. The association had been criticized for having an agreement with the supply houses, yet such an agreement was essentially fair and wise. All the masters asked of the supply houses was that they recognize the plumbers as the legitimate channel through which the public should secure plumbing goods. The manufacturers made the goods, the plumber was the legitimate distributor and installer. To leave that work to the public would result in bad work and, as a result, more bad health. In Toronto this recognition had been attained, with the result that to-day the class of plumbing done in Toronto was of a much higher standard than in former years.

The association had found opposition, the first of which came from the builders who were looking for cheap jobs for houses built for speculation. When the trade were educated to keep prices on a higher scale these builders were annoyed. They saw that the Toronto plumber should henceforth have a fair share of the profits on work done, the bulk of which profits had been pocketed by the builder in the old days. Opposition had come from some of the architects, partly due to bad faith on the part of a very small proportion of the association members, men who had lied to the architects and thus caused trouble.

He had the authority to propose through the representative plumbers present that the Ontario Architects' Association appoint a committee who

would be welcomed at the plumbers' headquarters and would be shown the by-laws, methods, etc., of their association. He desired the friendliest relations between the architects and the master plumbers. (Hear, hear.)

The plumbers should take such an interest in their work that their example would be a good influence radiating to every town and village in the Dominion. (Applause.) The association preached the gospel of sanitary safety along scientific lines, done by regularly organized sanitary experts. This would at once safeguard the public against dangerous plumbing, and will prevent the plumber from demeaning himself to accept less than what he knows to be right and fair.

MENU

Cream of Celery

"Ha! Ha! I have a bright idea." Carrick

Planked Niagara Whitefish

(Pomme Duchesse)

"Am I majestic? Well! Have a look."—Somerville.

Sweetbreads en Casserole

"Safford joints are perfect daisies."—P. McMichael.

Lamb Chops a la Luculus

Peas a l'Anglaise

"Acme! Acme! Where have I heard that word before?"—A. McMichael.

Roast Spring Chicken au Jus

Salad Tomato

"Lofty ideals! Nit! Standard for me."—MacArthur.

Nesserode Ice Cream Assorted Cakes

"I did not make the earth, but I made Dominions."—Patterson.

Angel Surprise

Fruits of the Season

"Brass is as good as gold when J. M. T. is stamped on it."—Morrison.

Black Coffee

Cigars

"A good pipe? Sure, Mike."—Anthes

The applause which greeted this peroration at last quieted down to a murmur of favorable comment, when in a burst of enthusiasm Toastmaster Armstrong proposed "His Most Gracious Majesty the King," which was greeted with musical honors.

The toast, "City of Toronto," was proposed by J. J. McKittrick, and responded to by Acting-Mayor Chisholm, who again expressed pleasure of welcoming the delegates.

"Our Guests, the National Association," was next proposed by Peter McMichael, who in about the shortest speech of the evening declared "the householder is in the hands of the plumber (Oh! Oh! Oh!) as far as health is concerned." (Laughter.)

President Thibeault responded to the toast. He was a plumber by accident. He had been born on a farm too small

to sustain all the family he was a part of, so he started to Montreal to seek work. As luck would have it, the first success he had was when he met a big Irishman who had just been started out with his tool bag as his stock-in-trade. He found the business an honest, decent one, so he stayed at it until he was finally a master plumber. He had in that time become devoted to Montreal, yet he was willing to admit that Toronto was superior to any place he had ever seen in his travels (applause.) He was in Toronto to learn something about his business. He felt confident that he would do so, and would thus be able to go back to his work better equipped than before for the problems likely to arise. Once again he desired to express his appreciation of the big-hearted way in which the Toronto people were treating their visitors. They in Montreal would do their best to reciprocate. He also desired to thank the trade press for the extra attention devoted to this convention.

Secretary H. A. Knox followed with an incisive speech. He wished he could utter as he desired his appreciation of the warm welcome accorded them. The master plumber, he went on to state, was helping others when he insisted on good work and fair prices. Their work was done, too, on national lines. Neither race nor creed nor color nor sectional influence ever affected their decisions. In former days the plumbers' trade had not been adequately respected for the reason that so many of the trade were uneducated and there was no organization. By intelligent, united action they could make their work one of the most highly respected in the land.

Chas. Plaxton, of Winnipeg, brought greetings from the western city, where building operations are being conducted on a stupendous scale. They were looking forward to the completion of an organization in Winnipeg, and hoped to have more to say at next banquet.

In proposing the toast, "The Architects," P. Hayes pointed out that in their skilful, artistic designing of the public and private buildings of Toronto, the architects had contributed in a material degree toward making Toronto such an ideal, beautiful city, as had been remarked by so many of the visiting delegates.

John Gemmell, president, and George secretary, of the Ontario Society of Architects, responded.

This report will be continued in tomorrow's Bulletin. Be sure to get a copy.

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JAMES SMART MFG. CO., Lawn Mowers, Stoves, Furnaces, Brockville, Ont.	B. GREENING WIRE CO., LTD., Wire, Hamilton, Ont.	THE FAIRBANKS CO., Machinery, Valves, etc. Montreal and Toronto.
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HARDWARE^{AND}METAL

AND CANADIAN MACHINIST

A Weekly Newspaper devoted to the Hardware, Metal, Machinery, Heating and Plumbing Trades in Canada.

VOL. I.

TORONTO, JULY 22, 1904.

NO. 2

National Master Plumbers' Association of Canada.

Report of the Ninth Annual Convention of the National Association of Master Plumbers, Steam and Gas Fitters of Canada.

(Continued from Yesterday's Issue).

Mr. Gemmell, in the course of his remarks, observed that the object of the architect and plumber were the same in that their work was designed to make the various buildings most suitable for the needs of modern civilization. The progress of civilization could almost be measured by the advancement in plumbing appliances. The Roman aqueduct and the use of private and public baths marked the highest point in Roman development. The plumbers' importance is now admitted. An ounce of prevention is worth a pound of cure, so one capable, expert plumber is as important to the community as sixteen doctors. (A voice—put him out; he's talking 16 to 1.) He had noted the strength attained by the Toronto association, and also the sudden rise in prices which seemed to result therefrom. But second thoughts showed that in all probability the present price is just about what it would have been even without the association. (Hear, hear; and applause.)

Mr. Gregg had followed with much interest the organization of the association and its branches. The plumbers had gone to work to organize provincial and local associations even before the parent association had been firmly established in all parts of the Dominion. The architects had spent all their time in completing their provincial body.

For some time W. H. Meredith has been known as the "Silver tongued orator" among the plumbing craft. By general consent after his speech in proposing the toast to "The Trade, Master Plumbers, Steam Fitters and

Supply Houses," Toastmaster Armstrong dubbed him the "Golden tongued orator."

Mr. Meredith had just returned from a trip to Winnipeg with Wm. Mansell,



Edward Gurney, the Orator.

and so was glowing with enthusiasm regarding the future of the Great West. Winnipeg, he had been informed, was destined to out-distance Toronto entirely. The country is in the growing

stage. Today it is young and any forward steps made now are likely to be of lasting benefit. So it should be the aim of every plumber to safeguard his business with organization and solid, well-reasoned principles. He remembered the time when the trade in Toronto had a profit of 35 to 40 per cent. This percentage was steadily reduced until it was practically wiped out and the trade had to call a halt. Now it is time to get back to a legitimate margin and stay there. Pointing to the badge at his breast he exclaimed the colors were emblematic. The black was typical of the dark hours that had been passed. The red was prophetic of bright days ahead, the white typified the purity of the business methods and the gold the gold that should crown the plumber here or hereafter.

Edward Gurney, in rising to respond, was held with the question, "Where are the old men?" The vast bulk of the men before him were young men, seemingly full of snap and vigor. Where were the old men? Were they crowded out of business, or were they taking life easy, leaving the forward work to the young men. It had been his experience that the same condition existed in all kinds of associational work in both Canada and the United States. For 40 years he had been engaged in associational work. He believed in associations, thought them a great power for good. Yet their usefulness could be easily lost by injudicious acts. The association that was guided by the great principle of fair play, that never tried

to tyrannize over any class or man, could be a great force for good. For a time it might even succeed in tyranny, but the end was inevitable for there is something inherent in the British blood that makes every Briton insist on his rights, maintain and fight for them. So long as the Master Plumbers' Association never tried to tyrannize he could promise them power and influence, increasing success. He was glad to note, too, the development of national sentiment. The two parties in the United States had practically declared against reciprocity with Canada. So Canada should in its tariff and in the personal view-point of every citizen say "Canada for the Canadians" and act up to that in all our business relations. (Hear, hear, and cheering).

Wm. Mansell was gratified when he looked back over the years of work that had been done to foster the associational spirit. At first it was difficult to get even the master plumbers to get together. Now the manufacturers, supply men and master plumbers, having learned the advantage of co-operation, were coming steadily closer together. He felt confident of the future success of the movement.

Alex. Saunders, of Goderich, was glad that the plumbers were looking after their business in a modern spirit. The Canadian manufacturers were setting the pace for the world in at least one line of plumbing goods, as evidenced by the export trade in plumbers' earthenware.

The toast to "The Ladies," proposed by the chairman, was responded to by Geo. Clapperton, Harry Mahoney and Geo. Cooper, all of whom manifested a proper spirit of devotion and gallantry in their remarks.

"Auld Lang Syne" concluded a splendid evening.

Thursday Morning.

When the chair was taken Thursday morning by President Thibeault the attendance was largely augmented by the arrival of more delegates. All those who had attended the banquet demonstrated themselves experts by the freshness of their appearance and vigor of their work.

At the request of the president, the Credential Committee presented its report through Mr. Mahoney, and the following were named as accredited delegates to the convention:

THE OFFICERS.

President—Joseph Thibeault, Montreal.
Vice-Pres. (pro tem)—W. H. Meredith, Toronto.

Treasurer—F. G. Johnson, Ottawa.
Secretary—H. A. Knox, Ottawa.

PROVINCIAL VICE-PRESIDENTS.

Ontario—H. Mahoney, Guelph.
Quebec—J. Laurier, Montreal.
Nova Scotia—Geo. Kinsman, pro tem, Halifax.
New Brunswick—W. Watson, Moncton, N.B.
British Columbia—J. McKinlay, Ottawa.
Manitoba—A. J. Hammond, Winnipeg.

ONTARIO PROVINCIAL ASSOCIATION.

President, Wm. Mansell, Toronto.
Galt.—Hy. Dakin, B. F. Bennett.
Stratford.—A. E. Sylvester, H. Peters and J. Myers.
Hamilton.—W. J. Clark, J. H. Stewart and And. Rogers.
Barrie.—J. H. Neelands and G. H. Ling.
Ingersoll.—S. King.
St. Catharines.—S. Gourlay and A. Riddell.

LOCAL ASSOCIATIONS.

Winnipeg.—C. Plaxton and A. J. Hammond.
Montreal.—John Watson, Thos. Mall, J. A. Gordon, W. R. J. Hughes, F. Bonhomme, Joseph Thibeault and Joseph Laurier.
Perth.—W. G. Butler.
Halifax, N. S.—Geo. Kinsman, James Farquhar and James J. Crump.
Guelph.—H. Mahoney and W. Stephenson.
Ottawa.—J. G. Johnson, H. A. Knox and John McKinlay.
Toronto.—Geo. Clapperton, G. H. Cooper, R. W. Harrison, K. J. Allison and H. Bevis.
London.—E. H. Russell, W. Smith and C. F. Needham.

A welcome addition to the day's deliberations was a delegation from the Buffalo Master Plumbers' Association: Daniel Lund, president of that body, Walter H. Cains, James S. Stygall and Wm. E. Jackson. These gentlemen were present on an invitation extended some time before by W. H. Meredith.

PRESIDENT'S ADDRESS.

To the National Association of Master Plumbers, Steam, Gas and Hot Water Fitters of Canada, at the opening of this, our Ninth Annual Convention:

It was my good fortune to be chosen as president of the National Association of Canada, which I consider a great honor, both to myself and to my confreres of the Province of Quebec. And I am pleased that the delegates to the convention in Montreal of 1903 chose for this convention the City of Toronto, which, on account of its natural beauties, is an ideal city in which to hold a meeting of this kind.

I trust that the sojourn of the delegates in this the Queen City will be most agreeable and profitable for all, knowing that the city fathers and citi-

zens cannot be excelled in the way in which they receive and entertain us as visitors. There is no doubt that everyone who has had the pleasure of being received as a guest by the City of Toronto will long remember the reception and attention shown to them.

Gentlemen, I would ask you now to give your attention to the business of this convention, and do not let the pleasures—of which there are many—interfere with the attendance at the meetings, which are of the first importance.

During my term of office I have been in close touch with the master plumbers of the Dominion, and I now take the opportunity to thank the officers who have so well and ably supported me, making my duties almost a sinecure.

The convention of 1903, held in Montreal, has been of great benefit to the Montreal association in particular, which I am pleased to inform you is now stronger and has much more esprit de corps than formerly.

In the past year I visited many of the master plumbers of Montreal, Quebec, Ottawa, and other cities, and found business good, and would suggest that the new officers make a special effort to help the organization in the City of Quebec, which has of late somewhat deteriorated. In the matter of provincial associations, Ontario is still in the lead, but there are indications of a better organization in the Province of Quebec, especially in the City of Montreal.

The reports of the officers of the national association will cover the business features of the past year, and I trust that you will give your earnest attention to their recommendations, which must be acted upon with justice to all concerned.

In support of our past president Mr. Powers' suggestion, I would again draw the attention of this meeting to the great necessity of a permanent official to act as secretary and visit the different local associations, to assist them in improving their organization. I trust that the reports of the several committees which will be submitted to you will be given your careful consideration, as there is room for improvement in many of the branches of sanitary by-laws.

I also beg to report that the good feeling between the supply houses, manufacturers and master plumbers still continues, and I would like to thank them for the able and generous manner in which they have settled any complaints brought to their notice.

In the name of the national association I wish to thank the press, particularly the trade journals, for the help

they have given the association. As president of the association I wish to thank the members one and all for their earnestness and kindness in helping me in my duties of the past year, and especially our secretary, H. A. Knox.

Yours truly,
J. THIBEAULT.

THE SECRETARY'S ADDRESS.

To the President, etc.:

To review the work of the past year is the reason you are in session. My duties as secretary have been cheerfully performed. Official life is an undercurrent. Its work is none the less effective

tion, several bearing the signature of the president of the United States National M. P. A., and others from supply houses in the Dominion. The details of the year's work are faithfully recorded in the minutes, this and other features of the management being due to the assistance rendered me by my fellow officers.

Respectfully submitted,
H. A. KNOX,
Secretary N. A. M. P.
Ottawa, July 19, 1904.

VICE-PRESIDENT'S ADDRESS.

To the President, etc.:

Gentlemen,—In presenting my report

president extends over the entire jurisdiction of the association, my field of observation has more to do with my own province, Ontario. I have looked with a great deal of pride and pleasure at the growth and popularity of our cause in this province. I believe, gentlemen, that the national association made a master move when they drafted into their constitution the right of each province to organize provincial associations. When we look at the good that has accrued to the craft in Ontario since the inception of a provincial association, especially this past year, we cannot but admit that the fullest benefits



Delegates and visitors of the National Master Plumbers' Association.—City Hall steps, Toronto.

nor the less arduous because the machine of legislation works easily, its only directors being honesty, application and wisdom. Much correspondence throughout the year exercised the consideration of your executive. All matters of contention were dealt with in a way to ensure the stability of the association, by extending its influence to places formerly unorganized and by increasing the interest of all master plumbers generally.

Various letters have been referred to you by the executive for your considera-

to you allow me at the outset to express my sincere regrets at being unable to personally greet you when in session in the Queen City of the West. You can rest assured, gentlemen, that while I may be absent from you in the body my thoughts will be of you, and I trust that your stay in our city will be so pleasant, and the profit from a business standpoint so great, that the convention of 1904 will remain in your memory as the best convention held by our national association.

While my position as national vice-

are only derivable through such agencies.

I trust that the sister provinces will rapidly fall into line and organize. Montreal is organized; why not the Province of Quebec? Halifax and Sydney are organized; why not Nova Scotia? Winnipeg is organized; why not Manitoba? The far west is partially organized; why not fully?

Now that our associations have commenced to build on business lines, and are putting into practical operation

more honorable and equitable principles in tendering and carrying out works entrusted to us, and our main aim being to see how perfect we can perform our work,—not alone from a sanitary standpoint, but also from a workmanship point of view, consideration being given to the smallest detail, and knowing as we do that a business run on these lines will command the highest endorsement of all right thinking people,—there should be no hesitation on the part of any of our members to stand by our principles. I trust that thoughtful consideration be given to the notice of motion of the Toronto association as to making the meetings of the national association triennial instead of as now, annual. We must all admit that more good can be accomplished by concentrating our effort along the lines of provincial organization.

In closing, allow me again to offer my regrets in being unable to be with you

have given this grave question the prominence it is entitled to.

If the master plumbers are responsible for the advancement of the apprentice, then it is time for them to take some action in the matter, but if the journeymen are responsible, the sooner we acquaint them of the fact the better for both parties.

As it stands to-day, the majority of boys spend three or four years waiting on the journeyman plumber and then begin to realize that they know nothing about the trade. They then leave to try some other calling, thereby losing three or four of the most valuable years of their life.

Speaking from experience, not one boy in ten learns the plumbing business, and we think it's the master plumber who should find the reason why, as he seems to be directly responsible to the parents for the advancement of the boys whom he takes to learn the plumbing business, but

master plumber, journeyman plumber and the future apprentice.

Respectfully submitted.

GEORGE A. PERRIER,
Chairman Apprentice Committee.

LEGISLATIVE COMMITTEE.

To the President, etc.,

Since the formation of the Ontario Provincial Association, the necessity of introducing legislation of a local or domestic character is everywhere apparent. Each municipality must work to assist its own salvation, local differences are responsible for particular legislation. The first step of each local should be to acquaint its neighbor of the remedial measures adopted.

The trade will then be so vitalized that its advantages will be of a material as well as honorary character. This action would introduce into inter-provincial trade a reciprocal form that would benefit commerce generally.

E. B. BUTTERWORTH,
J. LEVOCK,
P. J. BOIS,
GIL JULIEN,
T. BLYTH.

SANITARY COMMITTEE.

To the President, etc.,

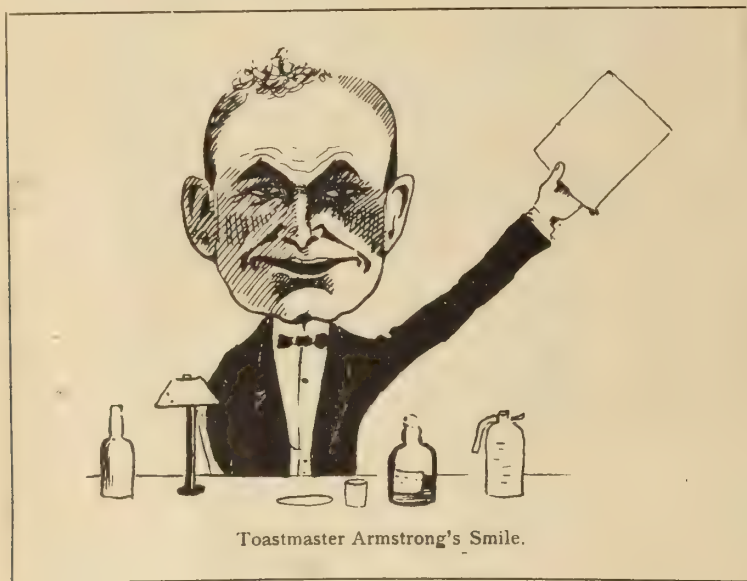
Gentlemen—It was not to be expected that anything new or startling would happen since our last annual meeting, but it is a source of great satisfaction to your committee to be able to report that the good work goes on apace. The stage of agitation and excitement being passed, matters sanitary are now taken up and considered and acted upon as a matter of course and regular routine that a few years ago would have been considered radical and revolutionary. Attention is being given to the food and water supply of our people as a matter of course and part of the duty of those responsible for things sanitary good and sufficient. Good and sufficient drainage and plumbing is considered to be an essential part of every dwelling, and people not aware of the facts think that it was always so, but those in our business well remember the time when the public had the opinion that anything nasty was good enough provided it was cheap.

The reports of the various provincial vice-presidents were next given as below:

ONTARIO.

To the President, etc.,

Gentlemen—As provincial vice-presi-



Toastmaster Armstrong's Smile.

and to express the hope that your sessions may be of very great interest to all; also that the year in which we are about to enter may be one of prosperity to all.

I shall in future do—as I have tried to do in the past—all I can to aid the association in its laudable aims and objects in bettering the trade conditions of our craftsmen.

Respectfully submitted,

R. ROSS,
National Vice-President.

APPRENTICESHIP COMMITTEE.

To the President, etc.

Gentlemen,—The Apprenticeship Committee beg to submit the following report: In the first place we might state that the apprenticeship question has in the past been lost sight of. We do not think the master plumbers at their annual meetings

unfortunately the system is bad, as each and every journeyman demands a helper, and as the boy becomes the servant of the journeymen plumbers, the question arises, is it profitable for him to learn the boy the trade? Taking into consideration the small percentage of boys turning out plumbers, we think the system is bad, as the boy of to-day should be the master plumber in a few years to come, and as the plumbing business ranks among the first in the land nothing should be left undone to advance the boy's interests.

Therefore it is the wish of your committee that the boy question should be fairly dealt with at our annual meeting, and if we succeed in advancing the interest of the poor plumber's helper, we think it will be a mutual benefit to the

dent for Ontario, I beg leave to submit the following report: When I had the honor of being elected to this office, I felt that it was a more responsible position than I was able to fill, but the way the president and officers do their part makes this office one of honor and very little work.

The Provincial Association of Ontario paid to the Dominion Association last year, \$217.25, the other provinces combined only paid \$225, very plain evidence that if we wish to make this association one of great strength we



A Namesake of Premier Laurier.

must get the provinces organized into provincial associations.

All the master plumbers in Ontario state that there is plenty of work and fair prices, while some few years ago it was very little work and poor prices.

We in this province have good reason to be proud of our association.

I might just state here that I firmly believe that my successor will have the pleasure of seeing, during the next year, our association double its membership.

We have an organizing committee that must do good work; the chairman is a man who would sit up all night to convince a master plumber of the good he must receive by becoming a member.

During the past year, I have had the pleasure of assisting in organizing Berlin, Waterloo and Mitchell, and visiting Orillia and Barrie in the interest of association work.

Gentlemen, let me once again urge upon you the necessity of provincial associations.

Respectfully,

HARRY MAHONEY,
Vice- Pres., Ontario.

BRITISH COLUMBIA.

To the President, etc.,

Gentlemen—As provincial vice-president for British Columbia, I beg leave to submit the following report:

I regret to say that I have not been as successful as my predecessor in office, but I have endeavored to get the province fully organized. It being impossible for me to personally visit the province, I communicated with a number of the leading firms in the larger towns. Some of my letters were promptly answered, others were not. A remittance came from Victoria, which I handed to the treasurer. The delay in getting our annual report from the printer prevented me from sending them earlier in the year. I trust this will not be the case this year, and that my successor in office will have the report in due time. All provinces organized should follow the recommendation re the issuing of certificates to local associations Manitoba being now represented in a live manner, its influence will certainly bear favorably on Manitoba.

JOHN McKINLAY,

Vice-President for British Columbia.

NOVA SCOTIA.

The President, etc.,

Gentlemen—Having had the honor to be appointed vice-president of this association for Nova Scotia, at the eighth annual convention held in Montreal, July 1st, 1903, it affords me much pleasure in submitting the following report. As you are no doubt aware my jurisdiction covers a considerable amount of territory, including Cape Breton, Prince Edward Island, and Nova Scotia.



When Harry Mahoney Sings.

I am sorry to state that the formation of a branch association at Sydney, C. B., while starting with brilliant prospects, owing to certain conditions of affairs in Cape Breton this association has gone backward rather than forward.

Our last year was about up to the general average. As I mentioned before it is a very large undertaking for me to keep in touch with the different members of my district on account of its extent.

To alleviate this in future we purpose holding an annual outing for our mem-

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bers and friends, taking from two to three days and combining business with pleasure. By doing this it will be the means of us all meeting, and any complaints or grievances could be fully explained and investigated.

We are looking forward to a big year, and we think prospects are good, our meetings are well attended, and the trade generally seem to be taking more interest.

With very few exceptions we find the manufacturers and supply houses living up to their agreement, and giving us every help to spread our association.

The introduction of sewerage and water into a number of the smaller towns in Nova Scotia has brought to the surface many who claim to be full fledged plumbers, who are incompetent to perform the work in anything like a sanitary or workmanlike manner. I would suggest that some action be taken by legislation to safeguard the interests of our calling.

I have to inform you with the deepest regret of the death of Charles Hermans of P. E. Island, which occurred since our last convention. Mr. Hermans was one, who always took the greatest

Winnipeg has been chosen
for the convention of 1905, to
be held at the time of the Win-
nipeg Exhibition.

interest in all the affairs of our association.

In conclusion, I beg to say that it gives me much pleasure to be present with the noble array of Canada's greatest trade, "The Plumbers," and I feel sure that you will agree with me that we are the men who work the hardest, longest, and are the poorest paid.

Respectfully submitted,
GEORGE KINSMAN,

Halifax, July 18, 1904.

MANITOBA.

To the President, etc.,

Gentlemen—The time has come for me to make my annual report as vice-president for Manitoba. I might say I have found it hard work and have had many difficulties to overcome, to get the master plumbers in line in our city. We are so far away from other cities where they have strong associations that we cannot get advice on matters of importance without a lot of correspondence and by the time we get an answer

the matter is just about dead and we must start to wake things up again when we get word back, whereas, if we could get the necessary information at once it would keep the association members alive to the good work that is being done all over eastern Canada. I might, if allowed, suggest a few matters of great importance to this convention, things that have come before your conventions other years, but as Manitoba has never put herself on record as for or against any work that has been done



Heavyweight John McKinley.

in convention, I wish to state a few of those matters before I drop down and out as vice-president of Manitoba, which at your last convention you did me the honor of electing to that position and I might say, I have to the best of my ability tried to fill in every way. I think you would do well to elect in all cases some one that lives in the province and does business there, as vice-president, instead of one living a thousand miles away who cannot even find time to look after affairs close to them, for when we in this part of the country read some report from one who

is in no way familiar with the work and has only sat down a few hours before the convention met and wrote his report we cannot tell what is being done by the master plumbers of Winnipeg, and only goes to make your association look like a farce in the eyes of the master plumbers of this city and the west and in no way encourages them to join the national association. Another I would like to call your attention to, is in regard to a permanent secretary, one who can do the work in the same manner as it is done in the States, and if properly done will help the association a great deal. I find even in a

it from the master plumbers from all over the country?" Surely he could find enough time to look after that end of the association and the interests of himself. I would also suggest we use the plumbers' journals more to air the work of the association and the good it will do for the plumbers to join in with us and live up to the Halifax Resolutions. For if we don't protect ourselves we shall find the wholesalers and manufacturers still continue to sell to non-members and outsiders.

In conclusion, I might say, I hope to see in the near future our association working along the same lines as some of



President Robert Ross.

The election of officers resulted as follows:

Officers for 1904-05.

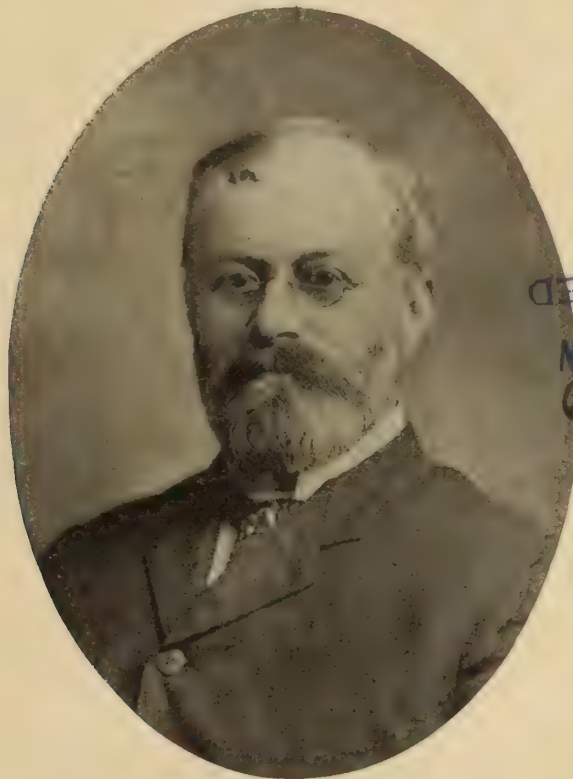
Past-president, Joseph Thibeault, Montreal.
President, Robert Ross, Toronto.
Vice-president, A. J. Hammond, Winnipeg.
Secretary-treasurer, J. G. Gordon, Montreal.
Treasurer, F. G. Johnson, Ottawa.

PROVINCIAL VICE PRESIDENTS.

Ontario, H. Mahoney, Guelph.
Quebec, W. J. R. Hughes, Montreal.
Nova Scotia, J. Farquhar, Halifax, N. S.
New Brunswick, W. Watson, Moncton, N. S.
Manitoba, James Mould, Winnipeg.
British Columbia.

CHAIRMAN OF STANDING COMMITTEES.

Legislative, F. Bonhomme, Montreal.
Apprenticeship, R. W. Harrison, Toronto.
Sanitary, Wm. Clarke, Hamilton.
Essay, Wm. Watson, Moncton.



H. W. Anthes.

small local association we cannot get a secretary to do all the work required of him so I cannot see how we can expect to find one that can afford to neglect his business to attend to the work of an association extending over the whole of Canada. I have not had the pleasure of meeting Mr. Knox, but have nothing but praise for the work he is doing for this association for only the honor there is in it, with lots of hard work attached. I cannot see myself how we can carry on this association without a paid secretary. One might ask, "Where is the money coming from?" I should say, "What is the secretary for, but to get

our sister associations. Our committees are now at work on it so I will not be able to say any more about it just now. Everything looks good, as the members are anxious to better the condition of the trade in our city and the west. I am sorry to say I find no association in Manitoba outside of Winnipeg.

I now desire to thank the members for the honor conferred upon me at your last convention in selecting me as vice-president for Manitoba. Trusting you will give these few suggestions due consideration, I remain,

Yours respectfully,

A. J. HAMMOND,
Winnipeg, July 13, 1904.



Secretary H. A. Knox.

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**HEATING
AND
PLUMBING**

1904

THE MACLEAN PUBLISHING CO., LIMITED.
Montreal, Toronto, Winnipeg.

"GOOD CHEER"

Stoves, Ranges,
and Furnaces.



The Jas. Stewart Mfg. Co.,

LIMITED

WOODSTOCK, ONT.

Western Branch Office and Warehouse :
Foot of James St.,
Winnipeg, Man.

HARDWARE AND METAL

AND CANADIAN MACHINIST

A Weekly Newspaper devoted to the Hardware, Metal, Machinery,
Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, JULY 23, 1904.

NO. 30

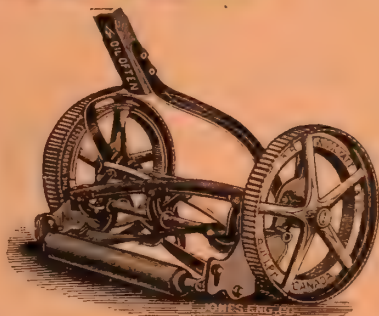
BUTCHERS' KNIVES
JOHN WILSONS
CELEBRATED
"PEPPERCORN AND DIAMOND"
BRAND CUTLERY.
TRADE MARK
BUTCHERS' STEELS

Canadian Agents: DORKEN BROS. & CO., Montreal

IT'S "QUEEN'S HEAD"

That's all you need to know
about Galvanized Iron.

JOHN LYSAGHT, Limited, Makers, A. C. LESLIE & CO., MONTREAL
BRISTOL, ENG. Managers Canadian Branch.



A Kicker

A man interested in the purchase of a lawn mower began to consider makes. Everywhere he came across a Taylor-Forbes Mower, and when he asked questions he heard nothing but praise for

The Taylor-Forbes Lawn Mower

When he went to buy one, he was offered a make less known, and, he correctly assumed, less satisfactory. He bought elsewhere.

No one ever finds fault with a Taylor-Forbes.

Taylor-Forbes Mowers are broadly and fully guaranteed. Repairs can be had quickly and at small cost.

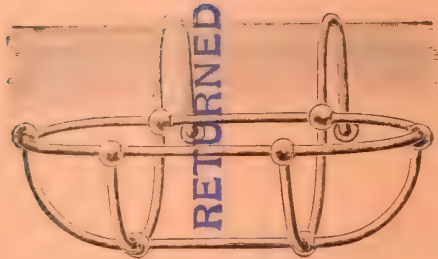
Hardware dealers should always stock the Taylor-Forbes. Send for catalogue and price list.

Taylor-Forbes Company, Limited, Guelph, Can.

Montreal Branch: 9 de Bresoles Street.

The Largest Manufacturers of Hardware in Canada.

BATH ROOM FITTINGS



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SPONGE HOLDER

Live Hardware
Dealers carry a
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FIXTURES

Tiling
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Room
Floors
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Walls.



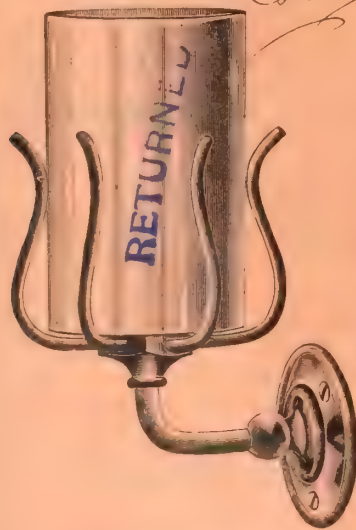
NO. 760
SOAP HOLDER



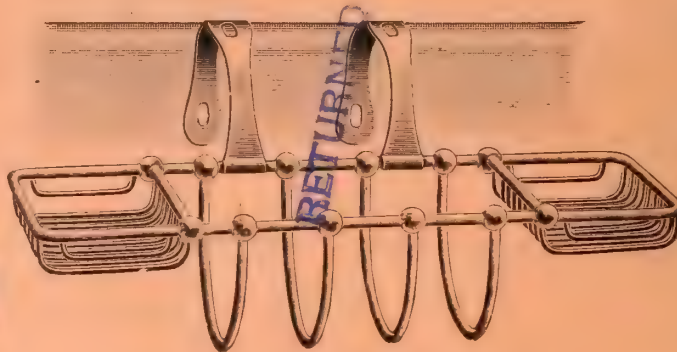
NO. 40
TOWEL RODS



NO. 753
SOAP HOLDER



NO. 440
TUMBLER HOLDER



NO. 700
SPONGE AND SOAP HOLDER



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TUMBLER, TOOTH BRUSH
AND SOAP HOLDER

WRITE FOR TRADE PRICES AND LISTS.

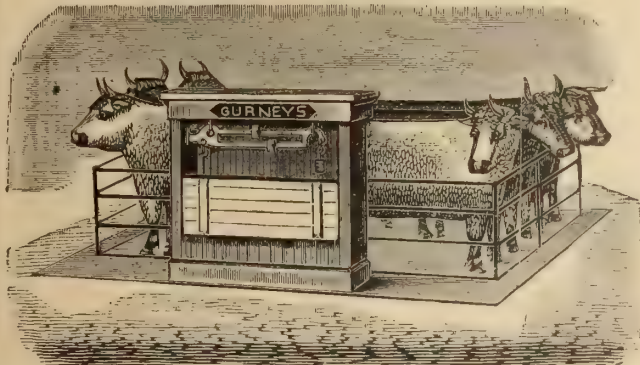
RICE LEWIS & SON
LIMITED
TORONTO.

*all RETURNED
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R. Cut Book 21
Page 62
am.*

THE GURNEY STANDARD SCALES

Absolutely Accurate and Reliable. The Best of Material and Workmanship. Recognized throughout Canada as

"THE STANDARD"



We make scales of every description. Established 1856. Send for catalogue and printed matter.

The Gurney Scale Co., Hamilton, Ont.

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THE CANADIAN RUBBER CO. of Montreal.

MANUFACTURERS OF

Rubber Belting,
Hose, Packing,
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We make a specialty of

HORSE SHOE PADS

the best in the market.

Write for Prices and Circulars.

Head Office : : MONTREAL

BRANCHES—TORONTO, WINNIPEG and VANCOUVER

Other Tools are very
good Tools, but

"YANKEE TOOLS" ARE BETTER



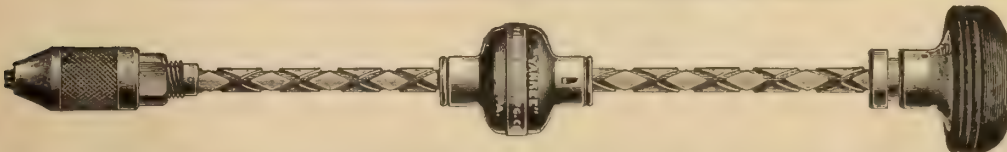
No. 15. "Yankee" Ratchet Screw Driver, with Finger Turn on Blade.



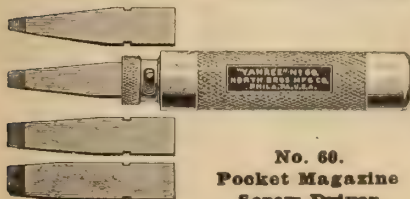
No. 30 "Yankee" Spiral-Ratchet Screw Driver, Right and Left Hand.



No. 41. "Yankee" Automatic Drill, Eight Drill Points in Handle.



No. 0. "Yankee" Reciprocating Drill for Iron, Steel, Brass, Wood, etc.



No. 60.
Pocket Magazine
Screw Driver.

Our "YANKEE" Tool Book
tells all about them. Mailed
free on application.

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**LIGHTNING,
GEM and
BLIZZARD
Ice Cream Freezers.**

**Toy Freezers,
Ice Shaves and
Ice Chippers.
Fluting Machines,
Hand Fluters.**

Sold by Leading Jobbers
in Canada.

NORTH BROS. MFG. CO.,

Philadelphia, Pa., U.S.A.

THOS. BIRKETT & SON CO.,
LIMITED
 Wholesale Hardware Merchants,
OTTAWA, ONT.



In introducing

**The
 Universal
 Bread
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we do so with confidence,
 knowing it will do all that
 is said of it.

To mix and knead
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 seem extravagant, but it
 is a fact

Here is a

**MIXER, KNEADER and RAISER
 ALL IN ONE.**

The old and disagreeable task of Bread-making is done away with.
 We shall be pleased to send booklets for your customers, and give prompt
 attention to your sample order.



Royal Manila is the Best

MADE IN CANADA.

Highest Quality. : Lowest Price.

WRITE, WIRE OR PHONE.

CANADIAN CORDAGE & MFG. CO.,
PETERBOROUGH, ONT. Limited

IN STOCK

Galvanized Wire

Plain Nos. 9 and 12.

Barbed 4 pt. x 6.

Special Prices.

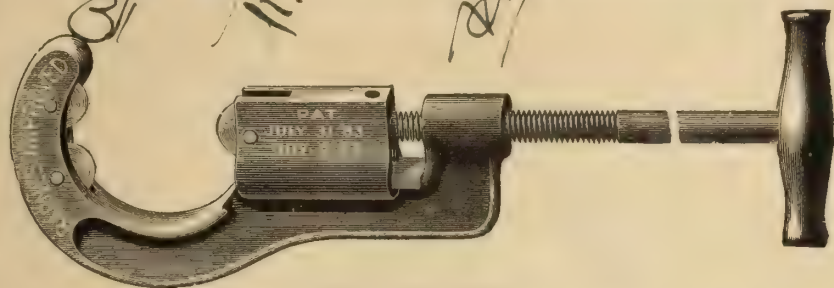
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M. & L. Samuel, Benjamin & Co.

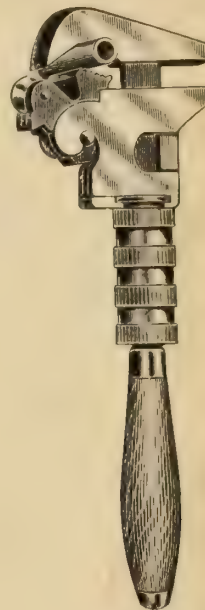
503 Temple Building - TORONTO.

English House—16 Philpot Lane, LONDON, ENGLAND.

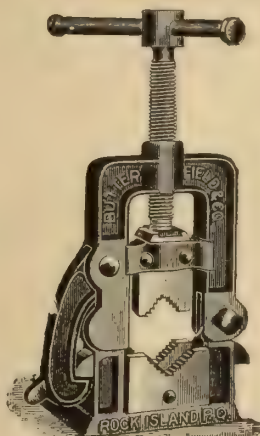
NO house is complete without a proper heating system. No heating system is effective unless it is properly installed. No good job of pipe fitting was ever done with poor tools. The accuracy with which good tools work, the satisfaction they give, the time they save and trouble they do away with, make them more and more valuable to the man who wants to do "a particularly fine job."



Barnes' Pipe Cutter.



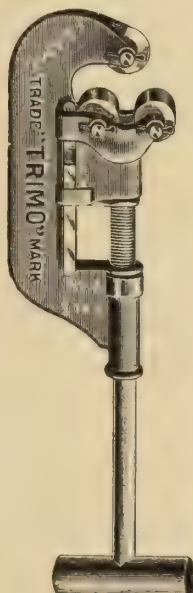
Bonney's Combination Pipe and Monkey Wrench, and Pipe Cutter.



Butterfield Hinged Vise.



Stillson's Pipe Wrench.



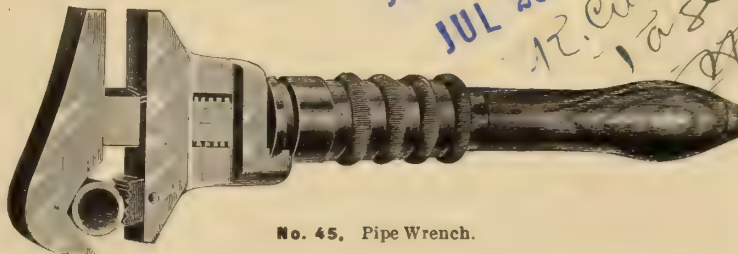
Trimo Pipe Cutter.



Trimo Pipe Wrench.



Oswego Pipe Cutter.



No. 45, Pipe Wrench.

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Cordage
Of every description.
Net Mountings,
Sand Line,
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Extra Long Lengths,
Ratline,
Shingle Yarn.

Core Rope,
Oil Well Cables,
Russian Packing,
Deepest Sea Lines,
Anchor Line,
Good Transmission Rope,
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Clothes Lines,
Only Best Material Used.

Log Line
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Dangerous to use Inferior Cordage.

Mail
Orders
Now
To us and
Recieve
Exceptional
Attention.
Low-priced goods are not always
the cheapest.



ONEIDA COMMUNITY'S WELDLESS COW TIES.

RETURNED

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Illustration shows

AMERICAN FLAT LINK

"OPEN RING" TYPE

Also made in "CLOSED RING," "THREE CHAIN" and "DOMINION" (or "SHORT") TYPES.

Oneida Community Cow Ties can be had of all the leading jobbers. We invite correspondence where any difficulty is experienced in obtaining our goods.

Write for New Catalogue.

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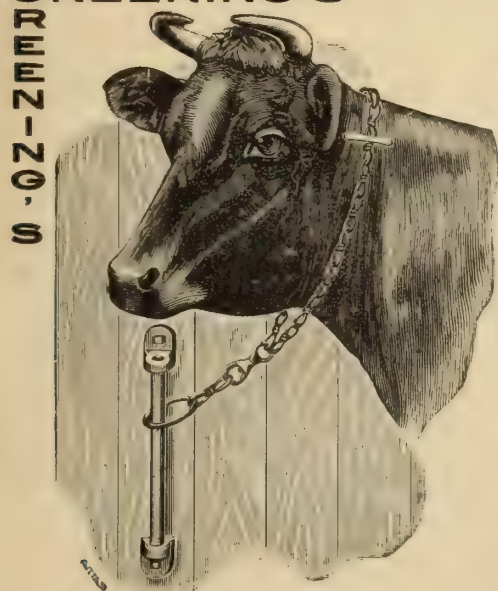
ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.



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The KENNEDY HARDWARE CO, Limited
49 Colborne St., TORONTO, ONT.

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PATENT COW TIES.

These Cow Ties have stood the test for years. Undoubtedly the best and strongest on the market.

It will pay to handle only the best.

A complete line of all sizes ready for shipment.

For Sale by all Jobbers.

THE B. GREENING WIRE CO., LIMITED
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STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of
STANDARD SIZES in Stock
WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.

WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
and
TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO

MONTREAL and TORONTO

LIMITED

SHOT.

In ordering, please specify **The Abbey Improved Chilled Shot Co., Ltd., Newcastle-on-Tyne.**

N.B.—We also make Hard and Soft Shot but strongly recommend Improved Chilled Shot for penetration.

N.B.—The only Company in Great Britain devoting its whole time to Shot making.

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and ELECTRO PLATE.**

Ask for our Catalogue and Quotations.



Dundas Axe Works

DUNDAS, CANADA.

Write for Prices

P. BERTRAM, - Manager.

STEEL STAMPS

For Manufacturers of
MACHINERY and METALWARE

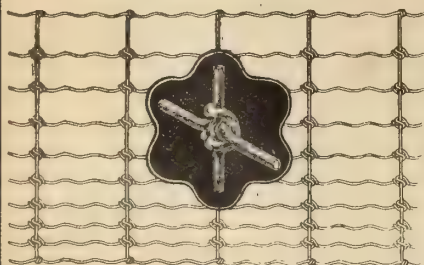
All our work is guaranteed to be satisfactory.

THE PARSONS-IRONS CO.

58 Adelaide St. W., - TORONTO.

Your Customers

the farmers are looking for a fence, strong, serviceable and durable at a reasonable cost. You can supply it to them in the

IDEAL

It is strictly up-to-date and the best value to be had in wire fencing to-day.

A GOOD SELLER

We have a style for every purpose in either heavy or light fencing. Write for catalogue showing fencing and gates.

Coiled-Spring Wire

unexcelled in quality, shipped promptly

THE

McGregor-Banwell Fence Co.

Limited

Walkerville, Ont.

MERRICK, ANDERSON & CO., Winnipeg

Sole Agents for Manitoba and N. W. T.



This design a guarantee of quality

DO YOU PUBLISH A CATALOGUE?

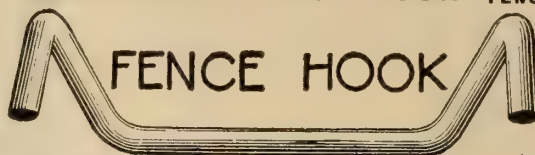
IF YOU DO YOU SHOULD USE "CANADIAN-MADE" PAPER
All grades, from the highest "Glossy Finish" to the rough "Antique" and bulky "Featherweight."

Your Printer
Can
Supply It.

CANADA PAPER CO.
TORONTO LIMITED MONTREAL

GALVANIZED FENCE HOOK

FOR FASTENING WOODEN PICKET ON WIRE FENCES

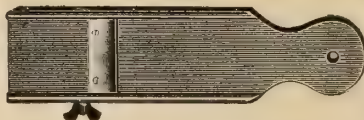


FENCE HOOK

WIRE NAILS, COILED SPRING, BARB and PLAIN FENCE WIRE, OILED and ANNEALED, CLOTHES LINE WIRE, STAPLES, etc.

THE WESTERN WIRE & NAIL CO., Limited,

LONDON, ONT.



"Little Shaver"

Canadian Agents:

E. H. GRENFELL & CO.
LONDON, ONT.

Cutest Thing in the Kitchen

Shaves chocolate so thin that it dissolves without stirring.
Slices Potatoes, Radishes, Cucumbers, Onions, Apples and all the smaller fruits and vegetables
Made of black walnut.
Knife is fine tempered steel.

MADE ONLY BY

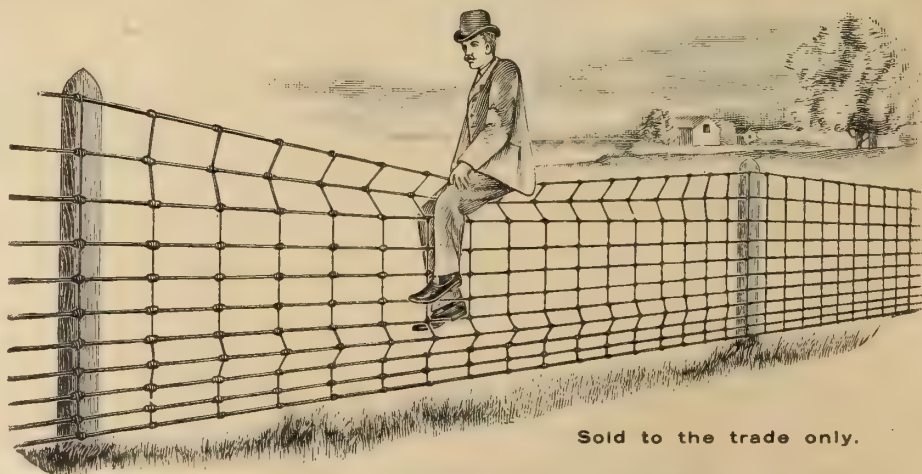
J. M. MAST MFG. CO., Lititz, Pa.

**SPECIAL
DROP FORGED
SPRINGS**

THE WALLACE BARNES CO.,
BRISTOL, CONN.

DILLON FENCING

THE HINGE IS COMPLETE, AND WORKS WITH THE UTMOST FREEDOM.



Sold to the trade only.

CAVERHILL, LEARMONT & CO., Agents
at Montreal and Winnipeg

Manufactured and sold by
OWEN SOUND WIRE FENCE CO., Limited
Owen Sound, Ont.



Just like fishing

Building up trade is just like fishing.

If you use the right kind of bait and cast your line where the kind of fish you want are most plentiful, you'll quite likely get a number of bites.

Then if you go about it right you are pretty sure to land most of them.

Apply the illustration to business.

If you want to catch the hardware trade, cast your line where all the good hardwaremen in Canada congregate every week—looking for bait to build up their businesses with—in **HARDWARE AND METAL**. But

Suppose results don't come at first
What be yew goin' tur dew?
Take out yewr ad, and kick yewrself,
An' go ter feelin' blew?
Uv course yew hain't; yew're goin' ter fish,
An' bait an' bait again;
Bimeby some nibbles 'n bites 'll come,
Then yew'll pull 'em in.

Our Department of Advertising Service is now providing good bait for a number of our advertisers—and stands ready to help a few more in this connection.

Drop us a line about it.

Hardware and Metal

10 Front St. E.
Toronto.

232 McGill St.
Montreal



Department of Advertising Service

We Can Quote You Attractive Prices

on fair sized lots of special pieces, turned from the bar, either in steel, iron or brass: these are made on 4 spindle automatic screw machines, and are accurately made. We are always glad to quote, and can give sure date of delivery.

Our works are on the Manchester Ship Canal, and we are closer to Canada in the matter of delivery than many of the American makers.

We make Cap and Set Screws, and would like to send you our catalogue.

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER, ENGLAND

GLAZIERS' DIAMONDS

Sharratt & Newth

43 and 44 Percival Street, London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

Established 181

ALSO

Lead Vices,
Carbon Tools,
Etc., Etc.,



Agents for Canada: **A. Ramsay & Son, Montreal**

BRASS CHAINS



FOR ALL USES

Let us know your needs and we will quote you. We supply brass chains in all sizes, Picture, Chandelier, Brazed Oval Link, Ladder, &c., &c., and can make it to your advantage to buy from us.

CAST AND STAMPED BRASSWARE OF EVERY DESCRIPTION.

JONES & BARCLAY, BIRMINGHAM, ENGLAND.

DAVISON'S MINIATURE TOOLS.

A perfect working model wrench, exact size of cut. Accurately proportioned and made exactly to scale.

Handsomely nickel-plated. Sells on sight.

\$2.00 per doz. Pearl Hand'e, \$3 00 doz.



DAVISON MFG. CO., 112 Front St., Brooklyn, N.Y.

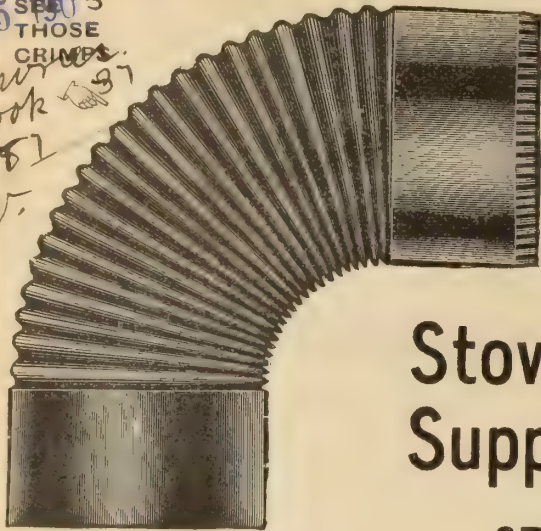
'Tis A Marvel.

The Hamilton "Take-Down" Rifle, Model 19, never fails to astonish those who see it for the first time, by reason of its beauty of design and finish. When they see its hard, accurate shooting, and realize that such perfection is sold for \$2.50, the wonder becomes chronic. "Boiled down" into a brief, fully-illustrated folder, we present the "true inwardness" of the "Hamilton 22." If you even "suspect" yourself of being an up-to-date merchant, that little folder should speedily be under your eye. Shall we get it there?

The HAMILTON RIFLE CO.,
Box No. 71. PLYMOUTH, MICH.

C. H. MENRELS PHILA.

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THOSE
CRIMPS
Book 97
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age
d. n.



One-piece Stove Pipe Elbows,
3 sizes.
The strongest made.

Kemp's

Plumbing, Stove and Furnace Supplies

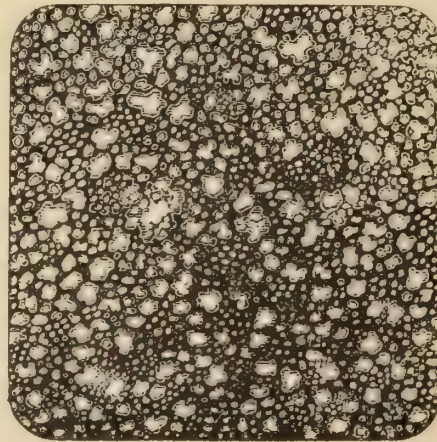
are made from the best
material by experienced
workmen.

STOVE BOARDS

Genuine Onyx Pattern.

Six Different Colors.

Entirely New Designs.



Furnace Elbows

IN

TIN,
GALVANIZED or
BLACK SHEET STEEL.

Coal Hods,
Embossed Stove Boards.

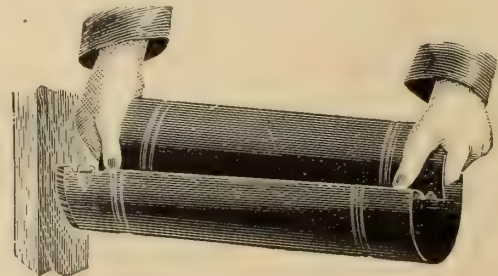
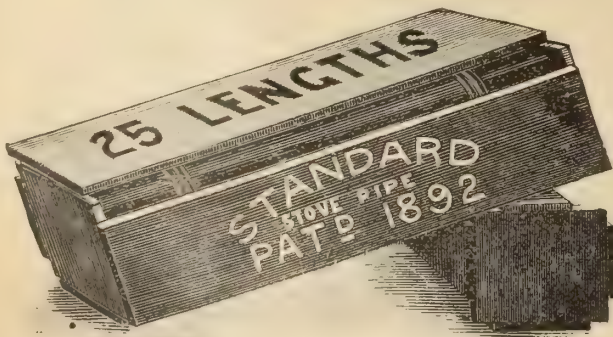


Wrought Steel Sinks,
3 sizes.
Painted, Galvanized or Enamelled.

Stove Shovels,
Coal Sieves,
Flue Stoppers,
Stove Pipe Collars,
Stove Pipe Dampers,
Stove Pipe Thimbles.

Kemp's Standard Stove Pipe (Nestable)

Easily put together, requiring neither rivets nor tools
Uniform in size, securing a perfect fit.



We carry in stock a full line of metals, comprising Canada Plate, Galvanized Iron and Black Sheets, also Tinplate, etc., which we are at all times prepared to supply at lowest market prices.

KEMP MANUFACTURING CO., TORONTO, Canada

Gossip About Ourselves

A Personal
Talk by
The Editor

ABOUT five months ago, before the snows had melted, we started our preparations for this issue of Hardware and Metal, our Annual Heating and Plumbing Number.

Last year, it will be remembered, our Annual Stove and Tinware Number and our Annual Plumbers' Convention Number were issued separately. When planning our work for this year we reached the decision that if the two numbers were combined in one Annual Heating and Plumbing Number the result would, in all probability, be stronger and more valuable in every way.

It is a fact well known to all connected with the hardware business or the plumbing trade that the great bulk of the plumbing done in Canada outside of the large cities is installed by hardware dealers. These men have long since recognized the value, yes, the necessity, of study of sanitation in the broadest sense, and in the majority of cases are either well equipped with knowledge of plumbing practices or have in their employ journeymen plumbers in charge of their plumbing department. Thus it is that the great bulk of those vitally interested in plumbing news are also eager for information regarding stoves, furnaces and tinware.

It has been our custom, too, to issue our report of the National Master Plumbers' Convention eight days after the meetings. It was also recognized that if we could, by an extra effort, have our report issued the day immediately after the convention and thus have it in our readers' hands before the delegates had reached their homes, we would add materially to the value of the report.

Accordingly our preparations have been based on the decision to issue a combined Heating and Plumbing Number the day after the convention of the National Master Plumbers' Association. This has entailed a great deal more

planning and more work than has been necessary in connection with these numbers in former years.

Does the result justify the change and the consequent increase of effort? We feel we must leave the answer to this to our readers. We are confident that this number is the best devoted particularly to heating and plumbing topics we have ever issued. And we know that when we say it is the best we have ever issued it is the best that has ever been issued in Canada, for Hardware and Metal is the only paper in Canada devoted to either the heating or plumbing trades.

While, however, we are pleased to realize an improvement in our work, we must confess that we are not satisfied with present attainment. A better paper than this one could be devoted particularly to heating and plumbing, and we freely admit that we will not rest content until we have reached a far higher standard than is evidenced in this publication.

For some time we have realized that we could improve the regular issues of Hardware and Metal if we could secure from the best authorities on plumbing, heating and lighting practices in Canada, technical articles on these topics. We have at present under consideration a proposition which may result in improvement in this regard. But we want the co-operation of every heating and plumbing expert in Canada, and are willing to pay a fair price for any articles suitable for publication in our plumbing and heating department. We want plans of jobs installed, together with details as to how the work in connection therewith was done.

Inasmuch as Hardware and Metal is the only trade newspaper in Canada devoted to plumbing and heating, and inasmuch as the great bulk of those engaged

in this work throughout the Dominion are subscribers to this paper, it has been impressed upon us by two of the most wide-awake plumbing goods manufacturers in the Dominion that if we could issue a "Daily Bulletin" during the convention we would be doing a service which all those in attendance at these meetings would appreciate. We in reply could only say that we would not hesitate at any step which would make Hardware and Metal more vitally useful and interesting to its readers—and would follow this up by issuing the daily bulletin as suggested. The results from so doing have been such that we feel that our thanks are due to Messrs. H. T. Bush and A. D. McArthur, of the Standard Ideal Sanitary Co., who made the suggestion to us, and to Mr. L. L. Anthes, of the Toronto Foundry Co., who cheerfully gave us his services as cartoonist, and to many others who helped in such a cordial way to make the bulletins a success.

The publishers of any trade paper conducted on enterprising yet conservative lines must expect to find competing papers started and, for some time at least, flourish "like a green bay tree." During the past eighteen months or so we have seen the advent, the rise to prominence, the decline and finally the disappearance of the Canadian edition of a Chicago paper devoted to plumbing interests. What was the cause of its mushroom growth and disappearance? The opinion that a paper devoted to plumbing could live in Canada and yet neglect the hardware dealer in the towns, and particularly in Manitoba and the Northwest. The hardware dealer is the big man in the plumbing trade in the west and in many parts of the east. And he plays the game square, employing competent workmen, doing good work, and charging fair prices. He is a factor who must be considered—and he is a constant reader of Hardware and Metal.

D. O. M.

TECHNICAL BOOK REVIEWS.

This week we present summary reviews of some of the standard technical works we are now in a position to supply to the Canadian trade. Comprehensive reviews of each book will be given from week to week in subsequent issues and of many other books which we will be in a position to offer in a few weeks. If you desire any of the books referred to below send inquiries to Technical Book Editor, MacLean Publishing Company, Toronto.

House Chimneys.

A

SERIES of articles and letters by different authors on Chimney Troubles and their Remedies; 62 pages, 5½x8 in.; 40 illustrations; paper cover;

sold in Canada by the MacLean Publishing Co., at 25c.

This book contains chapters dealing with the following subjects: Points on Chimneys; Defective Flues; How to Improve a Weak Chimney; Various Forms of Ventilators or Chimney Tops; Condensation in Stove Pipes; Smoke Pipe for Wood Furnaces; Remedying Down Draft in Chimney; Connected Flues Destroy Draft; and Fails to Bake on Bottom. Surely there is contained in this book information that will solve many of the problems that trouble furnace and stovemem.

Domestic Electrical Work.

Concise and Practical Explanations on How to Wire Buildings for Bells, Alarms, Annunciators and for Gas Lighting from Batteries; by W. A. Wittbecker; 55 pages, 5½x8 in.; illustrated with 22 diagrams; paper or cloth cover; sold in Canada by the MacLean Publishing Co.; in cloth, 50c; and in paper, 25c.

This is a book for plumbers, tin-smiths and hardware merchants carrying electrical supplies. The information contained in the book is meant to give practical help to those who have no previous knowledge of electricity to install simple electrical apparatus in dwelling houses, offices and workshops. The book deals with the simple bell circuit, the multiple bell circuit, various circuits, fire alarms, annunciators and alarms, burglar alarms, automatic fire alarms, electric gas lighting, and running wires in finished buildings.

Hardware Store Business Methods.

A series of articles dealing with Business Methods in the Hardware Store, by different practical men; 227 pages, 5½x8 in.; illustrated; cloth bound; publishers, David Williams Co., William street, New York; sold in Canada by the MacLean Publishing Co., at \$1.

These articles are written by practical and progressive hardware merchants, and their views and experiences should be of great value to all hardwaremen. In this work are presented the opinions of some 28 different successful hardware merchants on the same number of different topics. Some of these opinions,

at least, should prove helpful to all readers.

Easy Lessons in Roof Measurements.

Twelve short lessons on figuring from architects' or scale drawings the amount of material required to cover a given surface in flat, hipped or irregular shaped roofs; by W. Neubecker; 31 pages, 5½x8 in.; 12 illustrations; paper cover; publishers, David Williams Co., William street, New York; sold in Canada by the MacLean Publishing Co., at 25c.

This book would prove of value to mechanics in the building trades, but would also prove of worth to the tin-smith.

Tinsmiths' Helper and Pattern Book.

A book of tinsmiths' patterns with rules, diagrams and tables, by H. K. Vosburg; 120 pages, 4½x6¾ in.; 53 illustrations; cloth binding; sold in Canada by the MacLean Publishing Co., at \$1.

The author, knowing from experience the needs of the practical tinner, has prepared a book in which a number of simple patterns are described in the plainest way. There are rules for the surface measurement of circles, cylinders, spheres, triangles and polygons; and also for the contents of solid bodies.

Practical Hints on Joint Wiping.

A book containing articles on practical joint wiping for beginners in plumbing, with an appendix giving a selection of practical letters and articles; 66 pages 5½x8; 41 illustrations; paper cover; publishers, David Williams Co., William street, New York; sold in Canada by the MacLean Publishing Co., at 25c.

The first two articles in this work are on methods of joint wiping, an operation that requires perhaps more manual skill than anything else that a plumber is called upon to do. The first is written by a practical plumber, and the second by an expert joint wiper.

Steam and Hot Water Fitters' Text Book.

A book prepared for the Steam and Hot Water Heating Course at the New York Trade School, with supplementary chapters on house heating, specifications and surface estimating; by Thos. E. McNeill; 140 pages, 5x7 in.; numerous illustrations; cloth binding; sold in Canada by the MacLean Publishing Co., at \$1.

This book will be appreciated by those

who wish to master the principles of steam and hot water heating. The definitions in the beginning deal with the appliances, and little by little the reader is led on until at the close he is informed how to figure surfaces, lay out plans and install heating apparatus with the necessary piping.

The American Hardware Store.

A manual of approved methods of arranging and displaying hardware; by R. R. Williams, hardware editor of Iron Age; 576 pages, 6¾x10 in.; 660 illustrations; bound in cloth; sold in Canada by the MacLean Publishing Co., at \$3.

This volume is descriptive of the best methods of accommodating and displaying the large variety of goods which are carried in stock in representative hardware stores. The purpose of the publication is to prove to the merchant the value of having convenient and attractive stores. The author is indebted for many of his ideas to the successful hardware merchants throughout the country.

Plumbing and House Draining Problems

A selection of articles for practical plumbers, 297 pages, 6x9 in.; 146 illustrations; bound in cloth; sold in Canada by the MacLean Publishing Co., at \$2.

This volume provides reliable and practical information for ready reference and assistance to plumbers who are confronted by problems with which they have had no previous experience. One-half of the edition is devoted to new problems and special articles. This book will prove a valuable reference in any plumber's library.

Furnace Heating.

A practical and comprehensive treatise on warming buildings with hot air; by W. G. Snow; 170 pages, 6x9 in.; 90 illustrations; bound in cloth; sold in Canada by the MacLean Publishing Co., at \$1.50.

Besides dealing with hot air heating the work has an appendix on furnace fittings. The author has prepared a book

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

of reference for the furnace man or the architect. Details have been discussed at some length. There are tables which have been tested by years of practical use, and these will be of great value to the practical furnace man.

Kitchen Boiler Connections.

A selection of practical letters and articles relating to water backs and range boilers; fifth enlarged edition; 194 pages, 6x9½ in.; 113 illustrations; cloth binding; sold in Canada by the MacLean Publishing Co., at \$1.

The work is divided into two parts, the first on water backs and boilers and their connections, and the second on heating rooms from range boilers, a topic that has much practical interest to the plumber. There are few lines of work where so many little difficulties arise, and therefore the discussion of different questions which have arisen should be of great interest as well as practical value to workers in this line.

The New Metal Worker Pattern Book.

A treatise on pattern cutting as applied to all branches of sheet metal work; by Geo. W. Kittredge; 430 pages, 10x13 in.; 744 illustrations; cloth binding; sold in Canada by the MacLean Publishing Co., at \$5.

This is the most thorough and complete work that has been published for sheet metal pattern cutters. The first five chapters are theoretical or educational in their nature, while the last chapter is devoted to practical work. The book does not presume upon any previous technical knowledge upon the part of the reader, but aims to place before him in the preliminary chapters all that is necessary to a thorough understanding of the work performed in the last chapter, which constitutes the bulk of the book. This work, besides being a systematic treatise on the principles of pattern cutting, is also a valuable reference on pattern problems and as a fund of information on the subject treated.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Jewel Stoves and Ranges.

In the 1904-05 catalogue issued by the Burrow, Stewart & Milne Co., Hamilton, there is much that should interest the trade. The catalogue contains 164 pages of excellently illustrated information. Up to page 43 the catalogue is devoted to steel ranges for every pur-



Three Good Specialties

We want every S.W.P. agent to know the three fast selling varnish specialties listed below. To know them is to sell them. In themselves they are trade winners, but pushed as we help you push them they'll win for you the best and biggest varnish business in your territory.



A good varnish for general use. It is durable and elastic, working freely and easily under the brush. Thoroughly reliable and satisfactory in every respect.



A durable floor varnish. Very tough and elastic. Will not readily mar or scratch. The best floor varnish made.



A varnish specialty for the household. Gives a high grade finish. Can be rubbed.

These varnishes deserve your attention. They are business builders and money makers. They are made with a sole view to quality; they are backed by our reputation; they are pushed by our advertising; they are moderate priced. Write us today for further information and prices.



THE SHERWIN-WILLIAMS CO. PAINT AND VARNISH MAKERS

CANADIAN DIVISION: Headquarters and Paint and Varnish Factories, Montreal. Depots at Toronto and Winnipeg.

pose; on pages 44 to 79 cast iron ranges with sheet steel ovens, for hard or soft coal or wood, are described; on pages 80 to 105 attention is given to cook stoves of humbler pattern; coal and wood heaters in great variety of designs or quality are shown on pages 106 to 138; four pages, 139 to 142, are devoted to laundry stoves, while the remainder of the catalogue is bright with illustrations of hollow ware, dampers, thimble ends, extension fire backs; sad, tailors' and charcoal irons, soot boxes, ventilating wall backs, sledge hammers, horse tie weights, combined anvil and vice, dumbbells, etc. Goods made by the Burrow, Stewart & Milne Co. are well made, and the retailer desiring to keep in touch with the stove and range business in Canada should study this catalogue from cover to cover. It will be sent free to anyone in the trade mentioning **Hardware and Metal**.

Torrid Zone Furnaces.

The Lennox Mfg. Co., Marshalltown, Iowa, are manufacturers of the Torrid Zone Furnace, made of steel, in nine sizes, for hard or soft coal or wood. They will send a catalogue containing full information regarding this furnace to any reader of **Hardware and Metal** requesting same.

Plumbing Goods.

He who would keep in touch with sanitary work must keep in touch with plumbing trade literature. For this reason **Hardware and Metal** does not hesitate to predict an unusually keen demand for a 48-page booklet just issued by the James Robertson Co., Toronto. This booklet is the advance sheets of their catalogue "P.L." now under preparation, and it really marks a new step in plumbing trade literature in Canada. The paper, printing, etc.,

is all of the best, while the engravings are of a quality never surpassed in any catalogue of United States plumbing supply houses, who have hitherto been the standard of comparison in this respect. The first engraving, showing Robertson's "King Edward VII" bathroom, is a work of art, both in design and execution, and is worthy of a frame as an illustration of modern, high-class plumbing equipment. As these advance sheets are not for general distribution, yet are likely to be speedily exhausted, Hardware and Metal readers should write at once, on their own letter paper, and mentioning this paper. Do not send for a copy of this work without reason.

Kelsey Generators.

The real merit of the Kelsey Warm Air Generator is admitted wherever it is known. The price of this heating apparatus is, in fact, kept at a basis that could not be maintained without real merit. For this reason, the catalogue just issued by the James Smart Mfg. Co., Brockville, Ont., describing in detail the parts of the Kelsey generator, its system of heating and full information concerning its utility for home, school and church heating, will receive the general attention of those interested in the heating business. The claims made for this furnace and the testimonials (under various dates of 1904) concerning its work during the past severe Winter, are such as to compel attention from architects and furnace men as well as householders. Copies of this catalogue will be sent on request to any reader of this paper.

"Something Pneumatic."

"Something Pneumatic" is a monthly publication of the Chicago Pneumatic Tool Co., Chicago, the July number of which is just to hand. There are the usual number of illustrations of pieces of work being performed in everyday practice by the company's tools. Besides there is an interesting illustrated article on "The Value of the Air Drill in Remote Shops." Copies of the publication will be sent on request.

Link-Belt.

The Link-Belt Engineering Co., Philadelphia, Pa., are sending out a handsome general catalogue for 1904 in book form. The binding is heavy and attractive. The catalogue is 6x9, the standard size of catalogue recommended by the American Society of Mechanical Engineers. It is profusely illustrated, not only with the different kinds of link-belts, but also with the many uses to which the belts are put in in-

Hammer the Hammer



**Absolutely Safe
Accidental Discharge
Impossible**

No Danger. It's an IVER JOHNSON.

An Iver Johnson Revolver **cannot** be fired unless you pull the trigger. Drop it—throw it—toss it—**Hammer the Hammer** if you like, it is impossible to discharge it, unless you pull the trigger.

Made possible by a patented safety device that stands the test. Used exclusively on Iver Johnson Revolvers.

Any wonder the trade prefer them, and the public demand them?

Send for literature, mailed free upon receipt of request.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS.

dustrial purposes. These illustrations are of a high-class standard, and the typographical execution is excellent. Prospective buyers of link-belts may secure one of these catalogues from the Link-Belt Engineering Co., by mentioning Hardware and Metal.

Pneumatic Tools.

The Ingersoll-Sergeant Drill Co., New York, are issuing Catalogue 5 of labor saving tools operated by compressed air. The catalogue is attractive, being well illustrated, and the reading matter being descriptive and interesting. Their line of air compressors is illustrated and described, and also drills, forges and hammers for all purposes.

Parts for Automobiles.

Hayden Eames, Cleveland, O., are sending out the second edition of Catalogue 1, illustrating and describing the different parts of an automobile. The cover is quite original, and attractive, being made of burlap. The pages and the cover are held together by means of a lace. This firm are agents for the Federal Mfg. Co., Cleveland, O.; the Westinghouse Electric & Mfg. Co., Pittsburg; the Cleveland Axle Mfg. Co., Canton, O., and the Imperial Wheel Co., Flint, Mich.

St Louis Exposition.

The Crocker-Wheeler Co., manufacturers and electrical engineers, Ampere, N.J., are issuing a bulletin describing the power plant of the Intramural Railway at the St. Louis Exposition, the electrical machinery in which was installed by them. The different parts of the generators are illustrated. The most attractive feature of the bulletin is a large colored map of the exposition grounds. Readers of Hardware and Metal wishing may secure a copy of this handsome booklet by writing for it.

Gorgie Mills Glue.

J. & G. Cox, Limited, Edinburgh, Scotland, have issued a brochure, in which by illustration and description a remarkably interesting account of the processes by which glue is manufactured is presented to the reader. J. & G. Cox have a world-wide reputation for the quality of their glues, and it is probable that in every part of the British Empire, and in other lands as well, there will be many desirous of securing this brochure. An unique feature of it is the cover, which in both color and touch closely resembles the "Gorgie" brand of glue. Any person interested in glue can secure a copy of the book by writing for it.

H. S. HOWLAND, SONS & CO.

WHOLESALE
ONLY.

Telephone,
Office, Park 1584.

TEMPORARY WAREHOUSE:
212-218 Cowan Avenue.

SAMPLE ROOM at 21 Scott Street (Telephone
Main 4056)

(Where orders may be left, if not convenient to visit our Warehouse in Parkdale.)

LIMITED
ONLY
WHOLESALE.

Telephone,
Warehouse, Park 1585.

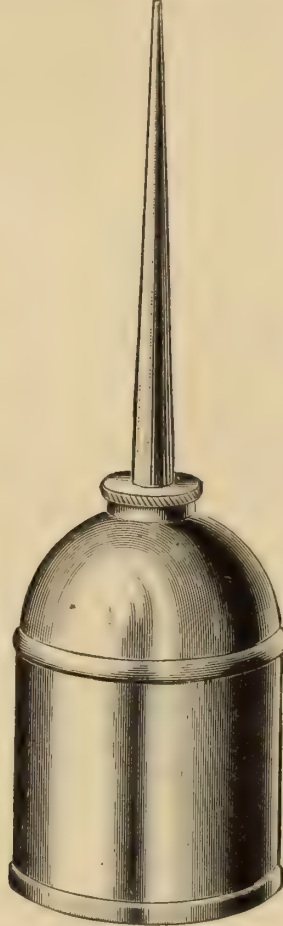
MOWING MACHINE OILERS, Etc.



Zinc Oilers



No. 701 Zinc
" 0701 Copper
plated



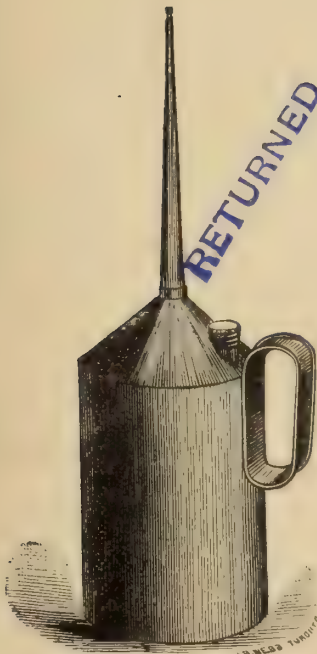
No. 600a
Steel Anti-Rust Oilers



No. 620
Steel Copper
Plated

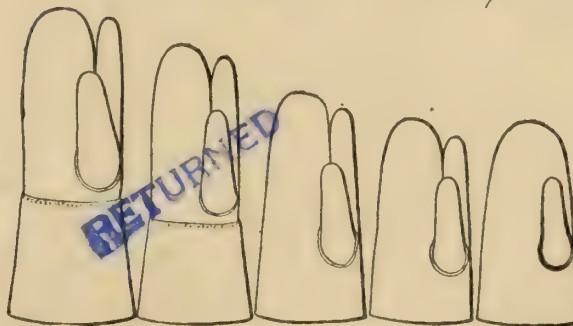


No. 690
Zinc, Tin Bottom

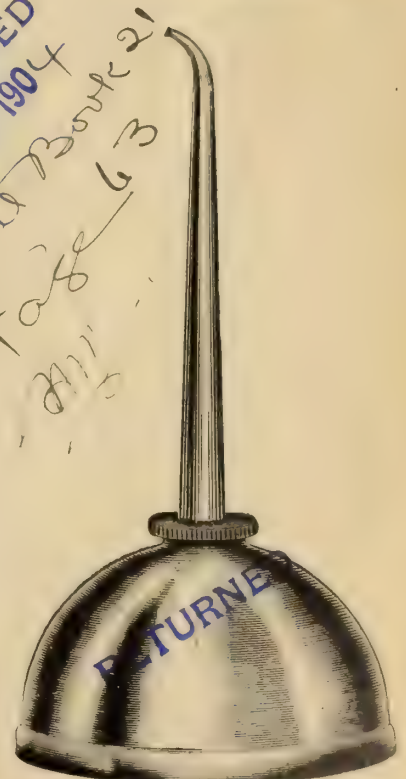


Tin Oilers
Pints and Quarts

HARVEST MITTS



For fuller particulars see our Hardware Catalogue.



Steel Anti-Rust Oilers

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.
Factory: Dufferin Street, Toronto, Ont.

Our prices are right.

DEPARTMENT OF ADVERTISING SUGGESTION AND CRITICISM

Edited by

John C.
Kirkwood,

TORONTO.

NOTE—Herein are discussed the principles and practice of advertising. Subscribers are invited to send Mr. Kirkwood specimens of their newspaper and other advertising, for the purpose of review in this department. Address care of Department of Advertising, **HARDWARE AND METAL**.

DOES ADVERTISING PAY?

THIS question is being continually asked, both by men who are advertisers and by men who have not yet entered the arena of publicity. Some say "yes" without an instant's hesitation; others will say "no," and some others will answer, "We don't know." Experience has provided the answer for many; others never having ventured, have no positive views on the subject.

Does farming pay? Does manufacturing pay? Does merchandising pay? To such questions it will be perceived that there is a double answer—one affirmative, one negative. So is it with the question, does advertising pay? So much depends upon the advertiser; upon his courage, his caution, his sanity, his experience; something depends, too, upon local conditions. The history of advertising abounds with examples of remarkable successes, and likewise of grievous failures.

Advertising is a force in business-building—a subtle force resembling the electric current; in the hands of novices, its employment is fraught with danger; in charge of the trained man, it accomplishes its work surely and safely.

I know of a young man engaged in the wholesale dry goods trade, who three years ago began with \$15,000—a bequest from his father's estate. Within this period he has twice been in financial straits, and his known surplus to-day is less than \$3,000. I know another young man who began life without a dollar; drove a delivery wagon; served behind a grocery counter; later became a dry goods salesman in a large departmental store; was speedily promoted to an important executive position, and in a year or two was crossing the ocean buying merchandise in the great centres of Britain and Europe. His career was one of steady progress, attended by an ever enlarging income. To-day he has a business, a wholesale business, of his own. Such histories are not rare. The point I make in narrating these contrasted experiences is that it is the man, rather than the business or the opportunity, that makes for success or failure.

So it is with advertising. It pays or does not pay, according to the quality of the individual who directs it. Blind ignorance of its principles and practice is likely to result in waste and loss. Enlightened knowledge of its nature and preparation, supported by good judgment, will make advertising profitable—how profitable depends upon the conditions governing each individual case.

A bright writer has said in answering this question, "Does advertising pay?": "Good advertising is news; presented at the right time, in the right place, and in a readable way. Much of the advertising of to-day is put in front of us so that we may by chance stumble over it; shoved at us as street hawkers shove gewgaws in front of passers-by; or so muddled with pictures and type and fantastic designs as to give us eye-strain. Fourteen sizes and styles of type are used to make an impression on people who all their lives are accustomed to reading from type of one size and style at a time. Advertising is necessary not only to the merchant, but to the consumer, and it deserves better treatment. It cannot be done with success "in any old way." Advertising should have ginger and dash and spirit. It shouldn't have to be peddled about to find readers. Good advertising pays; but only when it endorses quality and merit."

Preparation of Copy for Ads.

THERE always has been a feeling of animosity between the ad-writer and the man of the types, because of an apparent disinclination on the part of either of them to "get together" and compare ideas and offer suggestions. The purpose of this short talk is to, so far as possible, bring about that end. The printer who is worthy of the name has an innate pride in making his work as near perfection as it is possible for him to, and it is only through lack of material, or a misunderstanding of instructions that he fails to carry out an idea that appeals to him as being good,

writes Charles B. Harris, in *American Merchant*.

It is the desire and chief aim of an advertiser to make his ads more attractive than those of his competitor, and in so doing he should seek the assistance and ask the opinion of the printer in regard to the presentation of an idea which has occurred to him. It must first be understood that many ads and designs which appeal to the advertiser as good and appropriate, are impossible to execute in the majority of offices throughout the country. A merchant looks through his trade journal or the month's magazines and sees something which he thinks would improve the appearance of his next ad. He attempts to use it and expects his home printer to be able, with the limited equipment of a country office, to secure the same appearance as the magazine ad, which was probably set in an office with unlimited facilities. Do not get the idea that any design you may submit will be executed as you desire, because it cannot always be done, but rest assured that if you give the printer suggestions which he is prepared to follow, that he will do so and be very grateful.

Try and impress upon the disciple of Gutenberg the fact that you appreciate the difficulties he labors under and that you want to co-operate with him in securing the best results with the material he has at hand.

Let your copy first of all be legible and do not write upon any old scrap paper you may find handy. Write on one side of the sheet only. Where you use unusual words print them, so that they cannot be mistaken. Always be sure you know what you want to say before submitting copy to the printer, as changes in the proof are very hard to make and also expensive. Very frequently the change of one line necessitates changing the whole ad.

Underscore words or lines you wish displayed, by one or two strokes of the pencil, according to the strength you wish given to them. And do not lose sight of the fact that the more you can condense your text the stronger your ad will be.



RETURNED

JUL 23 1904

R. C. Cutler 2
39.

Tag
men

The new wing to our factory, which is not shown, will soon be completed.

OFFICE FURNITURE AND FILING DEVICES

HIGHEST GRADE IN WOOD AND STEEL.

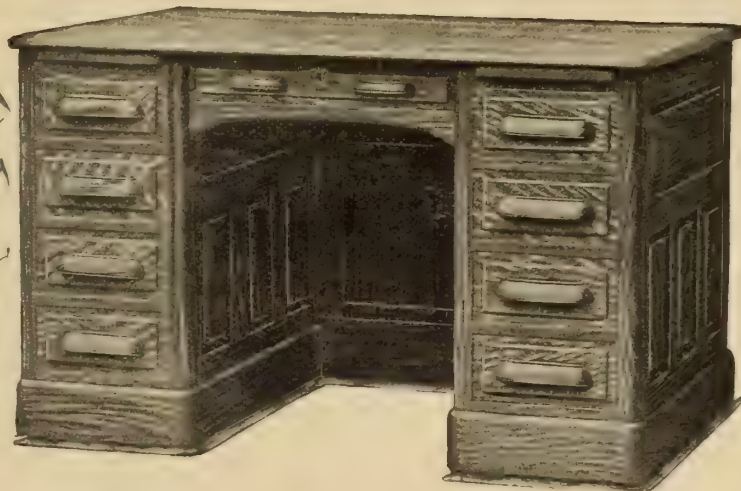
ROLL TOP
DESKS

FLAT TOP
DESKS

CHAIRS and
TABLES

TYPEWRITER
DESKS

TRUCKS



SECTIONAL
FILING
CABINETS

SHANNON
FILING
CABINETS

VERTICAL
FILING
CABINETS

RAPID ROLLER
COPIER

Our SECTIONAL CABINETS enable you to build up a Filing Cabinet just to SUIT YOUR REQUIREMENTS.

The Office Specialty Mfg. Co.

LIMITED

FACTORIES: NEWMARKET, ONT.

55 Yonge Street, TORONTO.

BRANCHES: Montreal, Ottawa, Winnipeg, Halifax, Vancouver.

Quotations on Snow Shovels or any article will be given on application. Write or Phone, Main 4240.

MACHINERY

PNEUMATIC TOOLS AND THEIR APPLICATION.

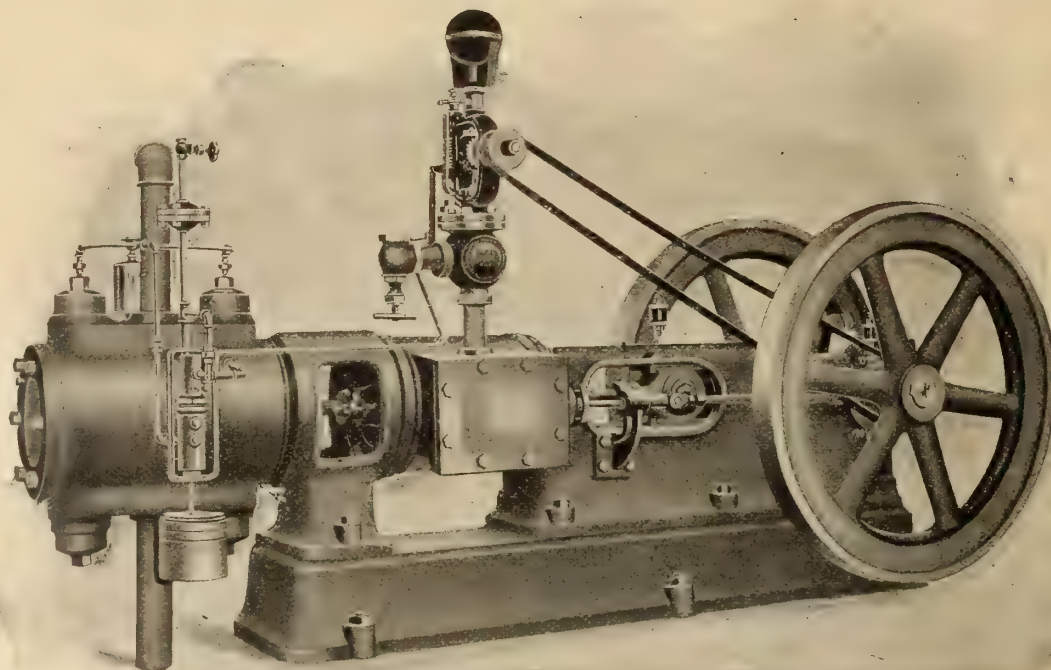
By J. C. A.

NOWHERE has the advancement of modern ideas been more marked than in the machine shop and foundry.

Here the knowledge that has come from scientific research has been put to practical use. Each advancement in one line has helped in the advancement of others. This is especially to be noted in the case of the steam engine and the electrical dynamo or gen-

The application of electrical power in the machine shop and foundry has revolutionized the practice in many lines. The chief of these is the drive. The advantages of electrical drive in many instances are too apparent to need description. The advancement in the application of compressed air has made as great a revolution in shop methods as electricity has, but in different lines for the most part. There are, however, a

ers, pneumatic riveters and holders-on, pneumatic caulkers and pneumatic hammers for beading the flues. The method of producing structural steel work has also been much simplified by the application of pneumatic drills, riveters and chippers. The air hoist is also used extensively in the machine shop. It is in the foundry, however, that it is put to the greatest use for handling castings and drawing copes. Of pneumatic tools for the foundry, the hoist, the sand rammer, the



Compressor; Chicago Pneumatic Tool Co.

erator. The great advantage of the high speed obtainable in the steam turbine was not recognized until the advances made in electrical generators demanded a high rate of speed in order to obtain the greatest efficiency from it. The result has been the placing upon the market of the turbo-generator, the many advantages of which over the reciprocating engine driving a generator are well known.

few places where electricity and compressed air compete, examples of which are cranes, hoists and portable drills.

THE USES OF COMPRESSED AIR.

Many are the uses to which compressed air is put in the machine shop and foundry. In the machine shop the greatest factor in the economical production of boilers has been the application of pneumatic drills and ream-

sand sifter and chipper for chipping castings, are the most important. The air-blast forge is, of course, used quite commonly in both machine shop and foundry.

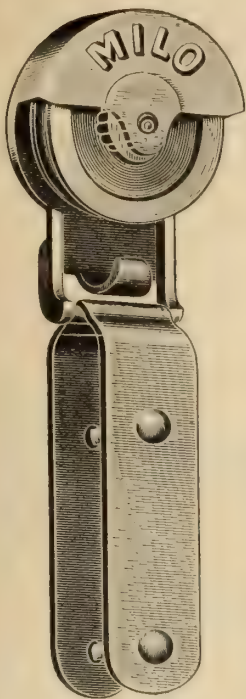
THE COMPRESSOR.

In a compressed air installation the compressor is, of course, the first essential. There is a great range of pressures through which compressed air is

TURNED
JUL 29 1904
CITY BOOK 21
Page 79
Amick

MILO FLEXIBLE

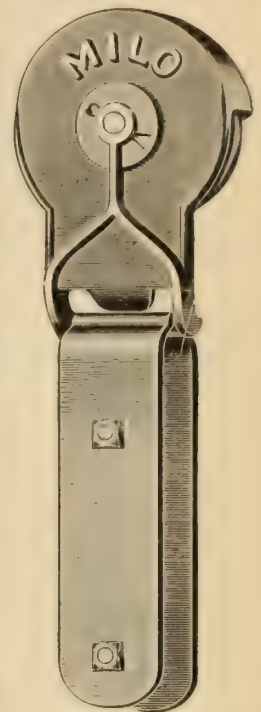
Barn Door Hanger



BACK VIEW.

A flexible hanger ; impossible to throw it off the track. Equals any in the market. Made from malleable iron, with wrought iron strips. Roller Bearings. Every hanger is guaranteed to be perfect as to quality and construction.

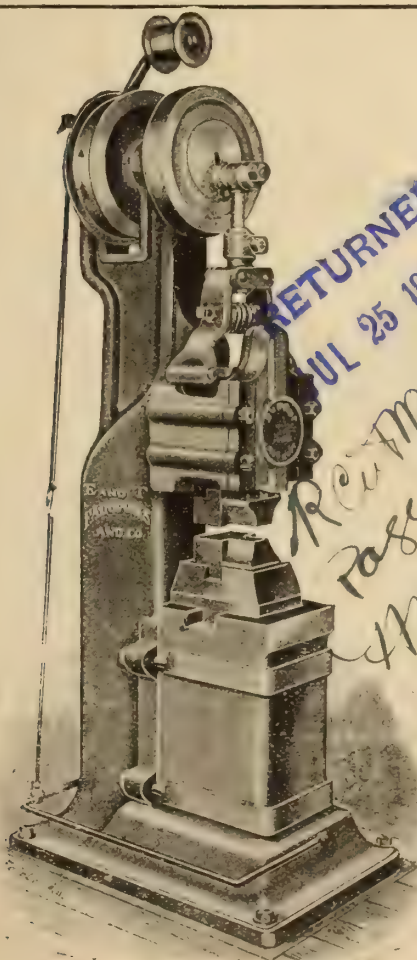
¶ Prices on the Milo will interest you. Get our prices for Barn Door Hangers and Track.



FRONT VIEW.

Kennedy Hardware Co., Limited

49 Colborne St., TORONTO.



The Fairbanks

DUPONT
PATENT

Power Hammer

DUPONT
PATENT

If you have used this hammer, you know its value ; if you have not used it, permit us to say that it has great superiority over other hammers.

We will send one to you on trial to demonstrate the truth of this statement.

Hand Forging

vs

Forging with
Fairbanks Hammer

ONE MAN AND HELPER REQUIRED.
25 BLOWS PER MINUTE.
ONE HOUR'S TIME CONSUMED.
POOR RESULTS.

ONE OPERATOR ONLY REQUIRED.
500 BLOWS PER MINUTE.
FIVE MINUTES' TIME CONSUMED.
EXCELLENT RESULTS.

The Fairbanks Company

MONTREAL

TORONTO

VANCOUVER

WINNIPEG

used, but the pressure used in ordinary machine shop and foundry practice is between 50 and 100 lbs. gauge pressure. For high pressures the air is compressed in stages, and even for pressures up to 100 lbs. it is better to use a two-stage compressor than one that compresses with a single stroke. The reason for this is that great heat is generated in the single compression, and

the decrease, even if the compressor be running at the time or not. However, if the service is very intermittent and the receiver quite large, this defect is minimized.

For such service the compressor is supplied with a speed governor, and also a pressure governor, or the two combined in one, so that the compressor may be automatically stopped when the desired pressure in the receiver is reached.

A compressor needs careful attention. Before starting every working part should be examined to ensure freedom from grit or dirt. The air cylin-

valveless hammer has no valves beyond the striking piston, which admits the proper amount of air to alternate ends of the working cylinder. The valve hammer has a reciprocating valve, either at right angles or parallel with the striking piston.

Valveless hammers have a short stroke essentially, and consequently will not strike as powerful a blow as a valve hammer. However, because of their simple construction, their life will be longer than valve hammers, and they are very well adapted for light work, such as beading flues, light caulking



"Little Giant" Drill, Chicago Pneumatic Tool Co.

the effect of this heat upon the packing and lubricants of a compressor can well be imagined. The great advantage of the two or multi-stage compressor is that the air can be passed through intercoolers between the stages of compression.

The after-cooler is also very important. It serves to reduce the temperature after the final compression. By reducing the temperature of the air to the dew point, moisture is abstracted before the air is used in the pneumatic tools.

There are compressors of several distinct classes, namely, steam or gas actuated, belt-driven, and motor-driven.

In direct connection with the compressors are used the receivers. These receivers serve in general two purposes; firstly, to absorb the pulsations from the compressor in order that the air may be delivered to the tools at a constant pressure, and secondly, to serve as a reservoir. Should the service



Chicago Riveting Hammer.

required of the air installation be intermittent it would not be necessary to install a compressor large enough to supply the amount of air in a given interval necessary to operate the tools during that interval. A large reservoir and a small compressor may be installed. There is an objection to this, however, because, while the tools are being used, the pressure is always on

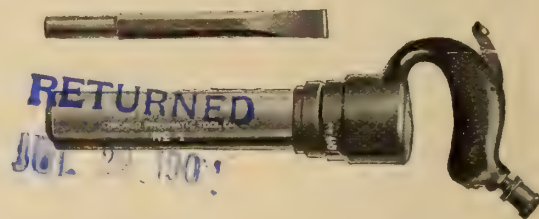


Chicago Sand Rammer.

ders should not be lubricated too freely, nor should the oil used be of the steam cylinder kind, since that is too thick. The supply of oil should be promptly turned off when the compressor ceases operations. The compressor should not be permitted to remain unused for any length of time without the pistons and piston-rings, etc., being removed and oiled.

HAMMERS AND RIVETERS.

The principle of the pneumatic hammer and riveter is the same. There are in general two classes, the valveless hammer and the valve hammer. The

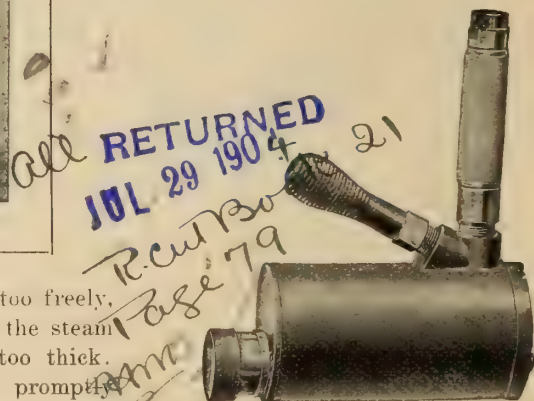


Chicago Caulking and Chipping Hammer.

and chipping. For riveting and heavy caulking and chipping the valve hammer is the best. It is said by firms using pneumatic tools that one man with a pneumatic hammer accomplishes the work of three.

COMPRESSED AIR DRILLS.

There are two distinct classes of air drills, the oscillating cylinder drill, and the rotary drill. Then there are two kinds of rotary drills, the one where there are simple blades held to the cylinder and central over the drill



Chicago Holder-on.

spindle, and the other where there is a casing containing three rotating cylinders, each of which is governed by a piston slide valve.

The oscillating cylinder drill is to be recommended for most work, although the simplicity of construction and small number of working parts of the rotary drill give it some advantages

WORK AND PRICES RIGHT GALVANIZING
ENGINE & PUMP CO. LIMITED.
 TORONTO, ONT.

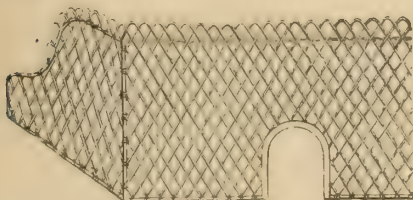
GENUINE

PRATTS ASTRAL LAMP OIL

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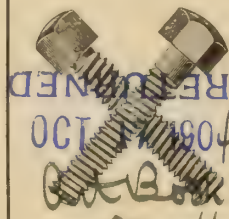
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We wish to say a few words in favor of your Craig Mine Crystal Corundum which we have been using quite extensively for the past six months. We have 28 knife blade grinding machines on which we have been using No. 40 corundum steadily for six months. We find it will do just double the work that any emery that we have ever had would do and that it is impossible to burn a blade with it, which is a great advantage to us as all emery will burn and consequently draw the temper. We are using finer grades with equal results. Wheels that have lasted us from ten to twelve days with emery are now lasting us from twenty-four to twenty-six with corundum. This is not only a saving in emery but is a great saving of other materials used in the wheels, as well as a saving in the time of making wheels as we are not obliged to make them so often. Besides the saving in time the work itself is very much more satisfactory. We can conscientiously recommend Craig Mine Crystal Corundum to all users of emery.

Yours truly,

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over the more complicated type. There are breast drills and hand drills.

SAND RAMMERS.

Pneumatic rammers for work in foundries are of comparative recent adoption, but because of their simple construction and the large amount of work they will accomplish, they are being rapidly introduced into the up-to-date foundries. By the use of one of these rammers one man can do the work of from eight to twelve men. All the operator of the tool is required to do is to direct the blow by moving the tool about by means of the handles. A rammer is certainly a valuable adjunct of a foundry to save the severe labor of ramming a large casting.

THE PNEUMATIC SAND SIFTER.

The pneumatic sand sifter consists of a frame containing a swinging sieve. It is operated by a rotary air motor. Foundries which are using these machines say that they are very economi-

moving heavy castings and for drawing copes. It is also used in the preparation of "scrap" from heavy castings. The most common type of hoist is the single cylinder, horizontal and vertical.

TRANSMISSION OF COMPRESSED AIR.

It has been demonstrated that pneumatic power can be transmitted for some considerable distance without much loss of energy. It has been transmitted as far as twenty-five miles through a pipe with a lining of special design, to give little resistance to the passage of the air. However, few will wish to transmit any great distance. In the foundry and machine shop no trouble will be experienced in conducting the compressed air to any desired point.

Foundry and Shop Rules.

THE following rules and regulations, which have been adopted by several foundries and factories in Ontario, are suggested as likely to preserve the most satisfactory relations between employer and employee:

1. Nine hours shall constitute a week's work.
2. No employee shall register time for any other employee.
3. A warning signal will be given five minutes before the starting signal. At the sound of the latter all employees must be in their place ready to commence work, and remain at work until the closing signal is given. Employees shall not be allowed to wash up, etc., before the closing signal.

4. Employees shall not be called from work by visitors or telephone except in cases of extreme necessity. In such cases notice will be sent from the office to the superintendent or foreman, from whom permission must be obtained.

5. Absence without permission will be considered as a vacancy, and may be treated by the foreman as such without notice to the employee, except in case of sickness, when immediate notice is required to be sent to the office or foreman of the department.

6. Each employee must keep his bench, machine or tools clean and in good order, and report at once when in need of repair. Spoiling material, negligent work, loss of tools, breakages, etc., through carelessness, will be charged to the employee at 25 per cent. advance on selling price or cost of repair or replacement.

7. Employees having charge of machinery must not leave it for any cause whatever when running. Employees are

absolutely forbidden to clean machinery while in motion.

8. Employees are not allowed in the factory when the engine is not running without permission from the office.

9. Smoking on the premises, or bringing in spirituous liquors is absolutely forbidden. Foremen are instructed to see that this rule is rigidly observed by all persons.

10. No notices of any kind, except relating to the company's business, will be allowed to be posted on or in the premises.

11. Fire pails or any other fire apparatus shall not be used for any purpose other than fire or fire drill.

12. Wages are paid individually for quantity and quality of work done, without relation to, and entirely independent of, the wages paid to or earned by any other employee.

13. Employees are allowed to use the hoist for freight purposes only. In other instances stairs must be used.

14. When necessity demands use of the elevator the gong must be sounded to prevent accidents.

15. Any employee leaving the elevator way open or unguarded, or who through carelessness or neglect endangers the lives of his fellow workmen, will be instantly discharged.

16. Employees are requested to give one week's notice before leaving, and to work during that time. Employees leaving without such notice shall forfeit all wages that may be due for any part of that period, and this shall not prejudice the right of the company from taking proceedings against such employees according to law.

17. Employees may be dismissed for cause without notice, and when discharged must leave the premises forthwith.

New Power House.

The Grand Valley Electric Railway Co., Brantford, have decided to erect a new power house for their radial line running from Galt to St. George. The site chosen for the building is on the line between Paris and Blue Lake, at a point about two miles out of Paris.

It is likely that the new power house will be the main one for the whole system. It will be used to supply the largest part of the line and will therefore be larger than the power house in the city. The plans call for a building 71 feet by 47.

The contract has been let to Messrs. P. D. Secord & Son, Brantford. Mr. Secord says that work will soon be commenced. The power house will be completed as soon as the lines to Galt and St. George are in working order.



Chicago Hoist.

THE PNEUMATIC MOULDING MACHINE.

This machine is a good labor-saving device for the foundry. It is constructed on the principle of a hydraulic lift, air being used instead of water.

Other labor saving devices of practical use in the foundry are the pneumatic brush and the compressed air sand blast for cleaning castings.

THE AIR HOIST.

The pneumatic hoist has many uses in the machine shop and foundry. The most common use it has in the machine shop is to set up work on machine tools, where it is attached to a traveling crane or trolley, over the tool. There are, however, numerous other applications. In the foundry, as has been before mentioned, it is commonly used for

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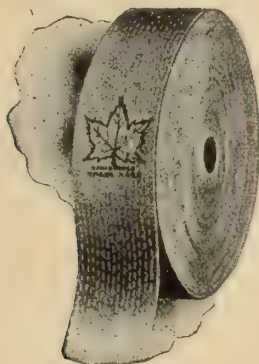
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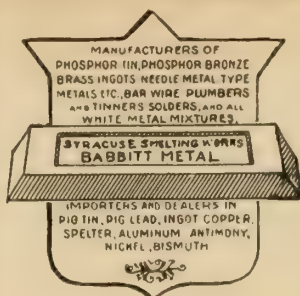
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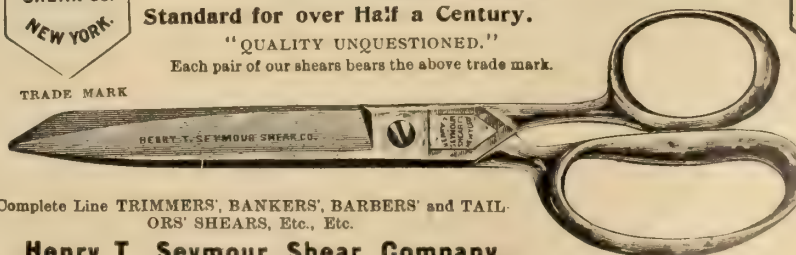
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CENTRIFUGAL PUMPS.

ALTHOUGH a form of centrifugal pump was designed as early as the year 1703 by Denis Papin, the famous French engineer, no further developments were made until the year 1818, when the earliest prototype of the present form of centrifugal pump was brought out in Massachusetts. This pump was of the type designated vo-

lute, and was provided with double suction openings and an open impeller. In 1849 Appold exhibited a pump, and later improved so much on the model that it became one of the chief features of the London Exhibition in 1851. The interest aroused by this pump was productive of much experimentation and discussion, which resulted in improving the pump until it assumed the form that it has maintained up to the last two or three years. Many attempts were made at high-head work, but without success.

From the crude and inefficient low lift pump, the Worthington Co. has developed a scientifically designed high lift centrifugal, which has found application within the field hitherto occupied by displacement pumps exclusively. While 50 ft. head was formerly considered the maximum for efficient operation, 2,000 ft. is now practicable, and the efficiency has been placed on a par with that of displacement pumps. The Worthington centrifugal pumps are divided into three classes, namely, conoidal, volute and turbine. The conoidal are designed specially for low lift and large deliveries, and are adapted to irrigation work, the handling of sewage and similar purposes, where an efficient and compact machine is desired. The space required in relation to the quantity of

water delivered is about one-half that of an ordinary centrifugal. Several of these machines are now in operation, each handling 35,000 gallons of water per minute. The volute centrifugal was the first to be developed, and with a few changes has to the present day been adopted by most manufacturers as the standard. Since the pumps have usually been designed without a correct fundamental understanding of principles, the results have been poor or indifferent, until important improvements were made, which enable them to work efficiently up to a head of 85 ft., and they have shown under test an economy of 86 per cent. It has been found possible to obtain a high efficiency at any head between 15 and 65 feet, without making the pumps either especially large or expensive. The turbine pump has been developed by a long series of experiments conducted by able engineers, under the direction of the foremost specialists in this field. The diffusion veins, which form the distinguishing feature, take the place of the usual whirlpool chamber in other forms of centrifugal pumps, and assist in bringing the water to rest without internal commotion or shock. They correspond in function to the guide veins of turbine water wheels. One of the difficulties presented by high lift centrifugal pumps has been the great

peripheral speed required when only a single impeller is employed. This has been overcome in the Worthington multi-stage pump, by mounting a number of discs or impellers each operating in a separate chamber upon a single shaft, and passing the water through the impeller chambers in succession. The lift can thus be multiplied three, four, or five times, while the number of revolutions is kept within such bounds that it is possible to connect the pump directly to a steam engine, or an electric motor.

The relative values of the several quantities pertaining to the operation of a centrifugal pump, such as speed, head, and capacity, can be varied through wide limits, to suit given requirements. In pumping for city water supply, for instance, it is desirable to maintain a practically uniform head, independently of the volume of the water supplied, the speed being constant. Again, in dry dock, and other variable head works, it may be desirable, in order not to overload the motor, that the power required should be practically constant through wide variations of head. While maintaining a constant speed the quantity of water delivered may be made to vary almost inversely with the head. To obtain satisfactory results under all conditions requires careful study of each special case, and it is this attention to minute details that has brought about results considered impossible a short while ago.

The electric motor enters a widened field of usefulness, through the improvement of the centrifugal pump, as the two are perfectly adaptable to each other. A motor driven pump set is very similar in operation to a motor generator set, the output being water under pressure in the first case, instead of electric current. At constant speed the power and

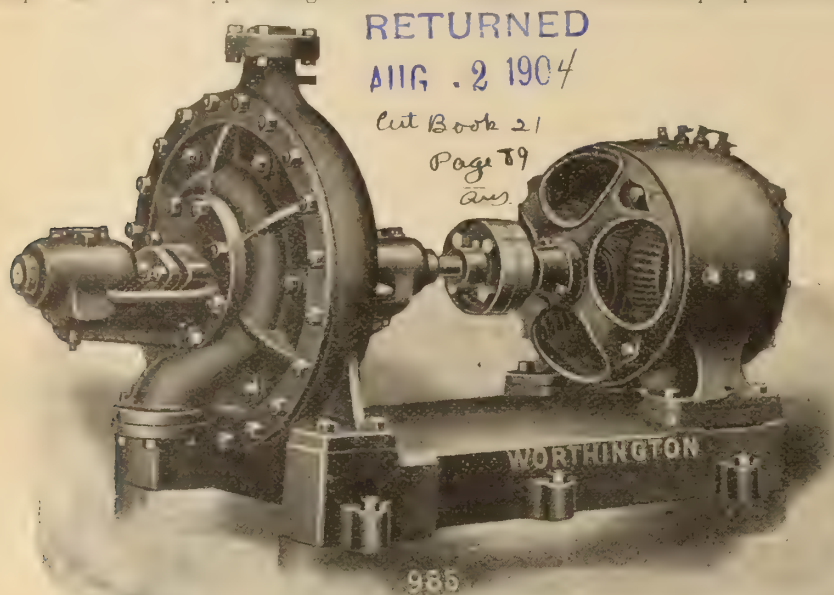


Fig. 1—Direct Motor—Connected 2½-in. Single-Stage Turbine.

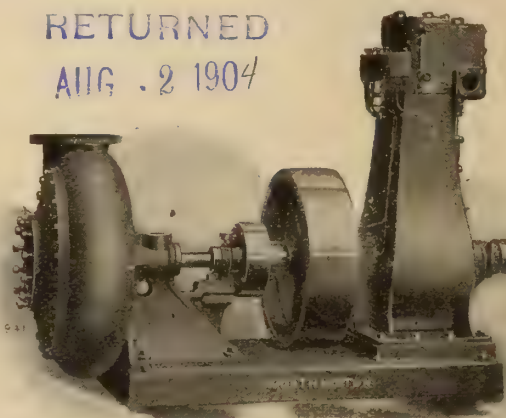


Fig. 2—Centrifugal Pump, direct connected to Vertical Engine.

output are inversely proportional to the resistance to flow, and the efficiency is practically constant within wide limits. The operation of pumps by electric

motors is often a complicated problem. First of all there are very few places where a constant delivery of water is wanted. To vary the quantity then, it is necessary either to vary the speed of the motor, or to provide a complicated and unsatisfactory system of by-pass valves, both of which methods are in

number of pumps wanted, the capacity of each in gallons per minute, the total head and feet to be pumped against, the type of pump desired,—horizontal or vertical,—from what source the water supply is taken, whether the water is clear, muddy, or gritty, the length and size of the discharge pipe, the length

ed, at the Caledonia Iron Works, Montreal.

How Much Heat Will a Brick Setting Take Up?

PROF. E. A. HITCHCOCK, of the Ohio State University, in a paper to the American Society of Mechanical Engineers, calls attention to the absorption of heat by the brick setting of a boiler and the important bearing it may have upon a boiler test, some of his tests showing that the setting was still absorbing heat from the furnace in excess of what it radiated after the fire had been burning seventy-six hours. This suggests a few figures as to the capacity of a setting to absorb heat. For a 72-inch boiler about 25,000 bricks will be required, which with the attached mortar will weigh easily 5 pounds each. Assuming that the average increase in temperature is 200 degrees and that the specific heat of the setting is .2, there will be required to heat up the setting 25,000 plus 5 plus 200 plus .2, equal to 5,000,000 B. T. U., which with a furnace utilizing 10,000 B. T. U. from each pound of coal would require 500 pounds to heat up the setting. At 15 pounds per square foot of grate this is about as much coal as would be burned per hour, so that for the first

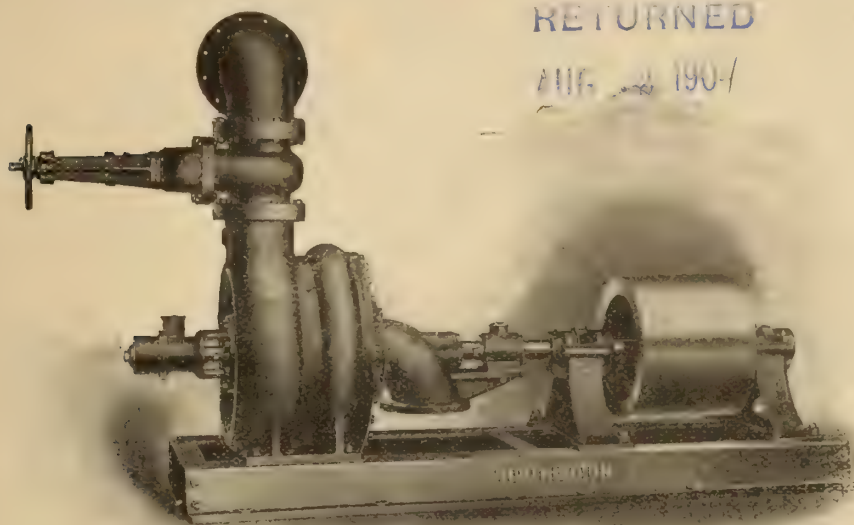


Fig. 3—Eight-inch Two-Stage Turbine, belt driven.

general wasteful of power, and unsatisfactory in operation. In some cases automatic devices are installed, intended to stop and start the motor whenever the pressure falls short of, or exceeds, certain limits. In the centrifugal pump, on the other hand, the flow is automatically regulated by the pressure, and the pump may be so designed that this regulation will be very close and exact. The centrifugal pump is noiseless, and the speed can be made to fit the requirements of the motor. There is no shock or pulsation in the piping, and nothing disastrous happens if the discharge is stopped. In the case of alternating current motors, the centrifugal pump has a decided advantage, in that the starting torque is very low, especially if the discharge valve is closed. The high efficiency and great convenience of electric power distribution renders the electric motor-driven centrifugal very valuable for mine pumping. The motors are entirely enclosed in water-tight housings, and the great simplicity and durability of the sets, especially when induction motors are used, renders them highly desirable, where the care of the pumping outfit must be left to ignorant and unskilled men.

When centrifugal pumps are being installed, several points should be remembered, and taken into consideration before a choice is made, which are: The

and size of the suction pipe, the average suction lift—if variable,—whether the service is continuous or intermittent, and the character of the driving power.

These pumps are manufactured in Canada by the John McDougall Co., Limit-



Fig. 4—Twelve-inch Vertical Volute Pump.

few hours of a test, starting with a cold setting, a very considerable proportion of the heat generated would be taken up by the brickwork, and a boiler so tested would be at an appreciable disadvantage as compared with one tested with the brickwork already heated.

Suggestions From American Foundrymen.

Extracts from Papers at the Ninth Annual Convention of the American Foundrymen's Association.

Modern Foundries.

By David Spencer, Chicago.

“ONE of the crying needs of the foundry industry to-day is up-to-date shops, and the firm who propose building a plant can do no better than to call into consultation a first-class foundry superintendent while the plans for building are being drawn. The building should be high enough to secure good ventilation and ample light. A good crane should be provided, and also a track running through the foundry provided with turn tables at either end, and in front of the cupola the track extending into the yard, so that large flasks may be loaded and run to place with but little help, instead of calling off a dozen men from their work to handle them. The shop should have a good cupola stage, giving sufficient room to hold at least three heats of fuel and iron. The majority of foundries to-day are crippled because of inadequate platform space at their cupolas. Of importance also are ample space for core room and liberal shelf room for stock cores, with plenty of space for mixing the sand. Modern conveniences in the core room, as well as other parts of the plant, will contribute largely to the successful operation of the industry, the content of the workmen and the production of the best castings at the lowest cost. The need for up-to-date foundries is fully as great as the need for good sand, facings, iron and tools, to produce good results, and when we have the good foundry and good materials, the last need of all is good men who take an interest in their work. I believe that the worst enemy to the foundry trade is an ignorant foundryman with a poorly equipped shop, because it is plants like these that completely demoralize the market. It is my hope that the time is not far distant when we may have a uniform scale for figuring foundry costs.”

“The Core Bench.”

By Benjamin D. Fuller, Allegheny.

“For small, light lettered box castings he advised the mixture of fine bench molders’ sand and molasses water to be used within twenty-four hours after making, and the core to be guarded against dampness. This material, he held, could be used over and over by the addition of a little new sand each day. For certain lines of

light and medium castings he advised a core made of ground resin and fine sharp sand, a combination that has the merit of being quickly dried and therefore serviceable in hurried work. It cannot be handled hot. Where a smooth, small hole is desired through a body of iron, molding sand and oil seems to be the thing, but where the core is light and of considerable length a difficulty in using this mixture is that it will shrink and warp. While this can be overcome to some extent, it has its drawbacks in making cores of certain shapes. The oil and sharp sand core is an excellent one where strength is desired, also a core which will vent readily, and can be rapped from the casting easily. For cylinders, jackets, ports, radiators and similar castings this is good.

“Where any considerable number of cores are to be made which present an uneven surface to be turned out upon the plate, it is wise to construct a pattern and cast dryers rather than to use a frame and bed in loose sand, as is often done.

“Likewise in making large work much time and worry are saved by shaping an arbor pattern and casting a sufficient supply rather than hunting up rods of different sizes and shapes, bending and straightening and fussing over them, and frequently turning out a worthless core at that. Money is well spent in the purchase of good sifters, anvils and rod straightening and cutting devices, also in having a man straighten out and assort rods and hooks, arrange plates and attend to work of this character.

“As is well known, sand that has been properly mixed and tempered is much more likely to produce good work than sand which has not been so treated. But as an illustration, let me cite a case from experience: Cores for large work were being made from a mixture of compound and sand at a ratio of one part compound to twenty-two parts sand, mixed by hand. After installing a power machine which mixed and tempered the batch thoroughly, better results were obtained from a mixture of the same sand and compound at a ratio of one of compound to forty of sand. This seemed a reasonably cheap mixture, but by using different materials we are now able to produce sixty parts

for the same cost as twenty-three parts first mentioned.

“The foreman coremaker should be a man capable of at once deciding how and of what mixture a core should be made, who is to make it, etc. Time records should be kept. A record of boxes in and out of order is also essential, so that any desired box may be located quickly.

“As essentials let me also mention good ovens, cranes, handy water attachments, steam jets leading into bosh for mixing of materials, such as core compounds and blacking, etc. Over all vigilance eternal as well as rectitude of conduct in dealing with employes, and good results can be obtained.”

“The Need of Modern Foundries.”

“The Foundry Apprentice.”

By C. H. Thomas.

“Already we have found there is a scarcity of good molders, except in times of depression, and so few boys are being educated to the trade that the problem of securing good molders grows worse with the years.” The speaker told of the method he used in educating and encouraging to a thorough and painstaking study of the trade.

“I tell the boy what facing to use, where to set his sprues and risers, if any; how to cut his gates; and then leave him alone until he gets stuck and asks for aid. Then I take him all through the part of the work he has done right, up to the point where his difficulty commenced, make several suggestions as to the different ways in which the job can be secured, and ask him which would seem to him to be the quickest and best. If he does not select the best way, I suggest it to him. If there are more than one off the pattern, and there are several ways to do the job, I advise him to try each a different way, and let me know the result. When he makes his report he has had time to think, and generally has selected the easiest way suggested. With a smile, he says that it seems twice as easy when he knows how, and that he can make the next one in very much less time, invariably doing so, if not interfered with by the molders.

“I praise his castings when they are turned out clean and sound, and when a bad one is made the boy and I hold a

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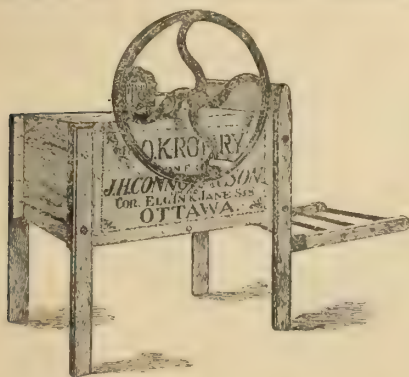
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WILL NOT BEND, BREAK OR RUST. EACH ONE TESTED AND GUARANTEED.

ERIE SPECIALTY COMPANY, ERIE, PA.

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion.	1 year.....	\$30 00
" " " "	6 months.....	17 00
" " " "	3 months.....	10 00
50 " " " "	1 year.....	17 00
" " " "	6 months.....	10 00
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MACHINERY WANTED.

Notices under this heading inserted free for subscribers to
HARDWARE AND METAL.

A SECOND-HAND swing (heading) sawing machine; give best prices. Box M 57, HARDWARE AND METAL.

CIRCULAR shears and double seaming machine, in good order. Moore Bros., Bradford, Ont. (29)

MACHINIST.—Wanted, a good machinist for general repair work; steady job. W. G. Paton, Wingham, Ont.

POWER PRESS, for stamping, weighing 850 to 1,500 lbs. George Coleman, Ridout street, London, Ont.

VERTICAL engine wanted; about 28 x 28, with fly wheel, about 16 feet diameter, 12" x 12" rim. Box 5, Globe, Hamilton.

WANTED — Foot lathe; describe and state lowest price. Box M 31, HARDWARE AND METAL, Toronto.

WANTED—36 x 36 in. x 10 f. planer; 16 ft. lathe, 24 in. swing; and No. 500 belt drivers' drop hammer. Address Box M 145, HARDWARE AND METAL, Toronto.

WANTED—Second-hand platform scales, capacity 5 tons. Box M 73, HARDWARE AND METAL, Toronto.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

ENGINE LATHE—Swings 17 in. over shears, takes 4 ft. between centres; good order; cheap for cash. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

FOR SALE CHEAP.—Medium size lathe; 25-pound power hammer; large wet grinder—all in perfect condition. F. E. McKyes & Co., 428 Visitation street.

GAS AND GASOLINE ENGINES.—Fairbanks, 1 to 100 h.p.; stationary, portable and marine; fully guaranteed; reliable and economical. Write for catalogue and prices. The Fairbanks Company, Toronto.

IRON PLANER—24 in. x 24 in. x 6 ft., second-hand in first-class condition, for sale; a quick turn over. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

JARDINE PATENT PIPE DIE—One man can thread a 2-in. pipe at one cut. Write for circular. A. B. Jardine & Co., Hespeler, Ont.

MARINE ENGINE—Fore-and-aft compound; 5-in. and 10-in. x 6-in., with suitable submerged tube vertical boiler; complete yacht outfit. Apply The Polson Iron Works, Toronto.

MACHINE TOOLS for prompt delivery—Planers, shapers, lathes, drills, bolt cutters, milling machines, punches and shears; also, full line of machinists' supplies. Good second-hand machinery taken in exchange. Show room open 7 a. m. to 11 p. m. H. W. Petrie, Toronto.

MACHINERY for 50-barrel flour mill; nearly new. Tenders will be received by the undersigned for the purchase of machinery of a 50-barrel flour mill, plansifter system, steam power. Steam plant and machinery will be sold separate if necessary. Highest or any tender not necessarily accepted. For further particulars apply to F. P. Shaw, Thessalon.

NEW STATIONARY ENGINES — 20 x 24 Waterous sawmill engine; 14 x 18 Waterous sawmill engine; 9 x 10 McEwen engine; 13 x 14 McEwen engine. Waterous, Brantford.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

THE STUART MACHINERY CO., LTD., 764-766 Main street, Winnipeg, sole agents in the West for MacGregor Gourlay's wood working and iron working machinery, than which there is none better. Also for Beardmore's leather belting, Dodge wood pulleys and self-oiling hangers, Soule steam feeds for sawmills, E. Leonard & Son's engines and boilers, Stratford flour mill machinery, etc., etc., etc.

THE FAIRBANKS CO.—Temporary warehouse, 124 Bay—standard scales, valves, trucks, letter presses, shafting, hangers, pulleys, belting, mill supplies, machine tools; "Fairbanks" gas and gasoline engines; write for price list.

AN 8-ft. Irwin trussed cornice break, in good condition. J. O. Cadham, Portage la Prairie. (32)

BUSINESS CHANCES.

A CHANCE for practical machinists, shop and tools for sale or rent; central location; three lathes, swing two feet, sixteen and twelve inches; iron planer, 24x24x6 feet; one large and one four-spindle drill; emery jack and other tools; motor power and dynamo for lighting; immediate possession. John Rodger, Hamilton.

FOUNDRY PLANT FOR SALE.—First-class foundry and machine shop; also up-to-date brass plant and valve patent, the best in America; machines up-to-date, patterns complete; sold together or in two parcels. Good business, location right, A1 bargain, good reasons for selling. Apply to Box 450, Mail and Empire.

SITUATIONS VACANT.

MACHINE hand, one used to moulding machine, for cabinet factory; steady work for first-class man. Apply to The Burton Manufacturing Co., Limited, Hamilton, Ont.

MACHINIST for six-foot brake lathe—must be sober and steady; married man preferred; steady job for right man. State wages and experience. M. Beatty & Sons, Welland, Ont.

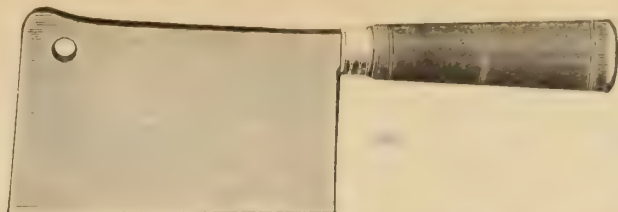
post-mortem examination on it, decide upon the fault, and look for the remedy. These are things the boy will never forget. In this way I try to have the good and bad results leave a permanent impression.

"As the boy advances we give him a chance to make extra time, and it is surprising to note the special energy an hour or two a day put in by the boy when a job is given him which will keep his mind occupied and hustling. We make it a practice of paying our men for what they do in the way of good work. We never allow a boy to close a poorly finished mold. He must learn to make a neat, clean mold before he can attain speed. He is told that a neat, clean workman can always be picked out by his personal appearance, and the condition of his floor and tools.

"Just as soon as the boy begins to show an improvement we start him ahead by giving him better and better work, not forgetting the little raise from time to time with the extra accompanying it, the idea being to keep the boy satisfied. It is surprising to see how they will vie with each other to get out the best job in the shortest time. This may sound like a fairy tale, but can be readily verified by personal inspection any day.

"Now for the very important matter of the apprentice ratio. The molders' union allows one for the shop and one for every eight molders—in other words, that which was good enough forty years ago, but is obsolete now. The foundrymen are wanting one to six, but this, like other modern ideas, the molders will not give. Nevertheless, it is a question for concerted action by both parties, and the nearer the apprentice ratio is brought to one to five the better, even if the apprentice be adjudged proficient in one or more branches of the trade only. If the ratio is not increased, and the trade itself made more attractive to the young man, the scarcity of good molders will soon become a calamity.

"The apprentice should be given the best work in the shop as soon as he shows that he is able to tackle it. We contract to teach the boy a trade. If he is bright, push him along. If he is dull, drop him, as he will only become another candidate for the minimum wage. What we want is maximum



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BUTCHER AND HOUSE CLEAVERS

FINE ASSORTMENT

F. W. LAMPLOUGH & CO., MONTREAL

TRUE BRAND CUTLERY.

POCKET CUTLERY

GUARANTEED QUALITY.



**RAZORS
SCISSORS**

BEST GOODS

RIGHT PRICES

E. F. WALTER & CO., ^{166 and 168} McGill St., **Montreal**

PRICE is a good thing,—but,

QUALITY is better.

Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

Wilcox Mfg. Co. of Ontario, Limited
LONDON, ONT.

NOT IN THE COMBINE

Ask for Prices of
Shovels, Spades, Scoops, Etc.

WE HAVE A LARGE STOCK.

CANADA HARDWARE CO., Limited, Montreal

days' works, with maximum days' pay, and none of the other. Only then will the laborer be worthy of his hire."

"Specifications and What They Mean to the Foundryman"

By David Reid, Columbus, Ohio.

"In our trade we have found the rule of thumb method is gradually giving way to definite estimates and specifications. The average foundryman makes his first and greatest mistake when he is careless in studying specifications before bidding on a contract, and is forced to devote hours and days in scheming how to cut the cost so that the job may be secured and yet be profitable. If the terms of the specifications define the material as cast iron No. 1 with a tensile strength of 23,000 pounds per square inch; or No. 2, to be high grade cast iron or gun iron, to be made of charcoal metal, in the air furnace, or other process giving a product with a tensile strength of not less than 28,000 pounds per square inch, with an elongation of 0.25 per cent. before rupture, while under strain, he often passes them from his mind with the feeling that good commercial work will cover this all right, takes the contract, only to have his eyes opened and his credit and bank account impaired on account of his inability to carry out the specifications as agreed. Such specifications are being constantly drawn up, not for the purpose only of getting good commercial products, but to obtain something far superior to every day castings.

"While heartily in favor of and preferring to work to specifications, the writer believes that the foundry industry has not yet reached the point where engineers can give full sway to their knowledge and imagination, too often the latter, in drawing up specifications for castings. The efforts of the American Society for Testing Materials, of which this association is a component part, to make their specifications for pig iron, cast iron and a variety of classes of finished castings the standard for the whole world, is therefore to be commended and should have the full support of every member of our association."

Machinery and Electrical Notes.

THE Toronto and Hamilton Electric Railway Co. will construct a deep underground crossing under the C. P. R. and G. T. R. tracks at Toronto Junction.

The Government will spend \$100,000 in installing an electric plant and establishing electric lights every 400 feet along the Welland Canal.

The stock-in-trade, machinery, appliances and patents of the Centrifugal Windmill & Mfg. Co., Guelph, now in liquidation, are being sold by tender. J. M. Taylor, Guelph, is liquidator.

The British Columbia Electric Railway Co. entertained the local manager at Victoria, A. T. Goward, at a dinner, when they presented him with a piano, in honor of his recent marriage.

The roof of the new foundry building of the Westinghouse Electric Mfg. Co., Hamilton, collapsed recently, injuring several workmen.

The Manitoba Construction Co. have secured the contract for the construction of the large power house in connection with the new railway shops of the C. P. R. in Winnipeg.

The Hamilton Iron Moulders' Union will hold their annual picnic at Mona Park on July 30.

The Brantford City Council is in favor of municipal ownership of telephones and electric lighting.

A complete machine shop outfit is being installed by H. W. Petrie, Toronto, for A. Battersby, Prince Albert, N. W. T.

The Sylvester Mfg. Co., Lindsay, Ont., have installed a Cincinnati milling machine.

A two-span, 120 feet each, steel bridge will be constructed over the Thames River, in the County of Middlesex, Ont.

H. W. Petrie, Toronto, has just installed a brass lathe for Fader & Co., Adelaide street, Toronto; and also an engine lathe for W. H. Sumbling, Toronto.

Among the orders recently filled by H. W. Petrie, Toronto, are: A high pressure boiler and a Wheelock automatic engine for the new factory of Walker & Clegg, manufacturers of upholstered goods, Wingham, Ont.; Law's patent power hammer for the Niagara Falls Machine and Foundry Co.; a heavy punch and shear for the Consumers' Gas Co., Toronto; an 8 h. p. gasoline engine for J. A. Darch, Toronto.

The extraordinary development of the Canadian west during the past year has forced the C. P. R. to increase their telegraph lines so rapidly that by the end of this year they will have added to their system 2,000 miles of new wires and pole lines. The first of the year they added over 600 miles of new line between Laggan and Lake Superior alone. An additional copper wire has been placed all the way from Montreal to Winnipeg, and new lines are being put

in between Toronto and Detroit, and Toronto and Peterboro.

Tenders are being called for the construction of a city hall and a power house for waterworks and electric lighting system by the City of Moose Jaw, Assa. The time for the tenders remains open until August 15.

A company of Winnipeg capitalists are promoting a company, to be called the Interurban Railway, and are applying for incorporation under the laws of Manitoba. The proposal is to construct a line of electrical railway from the Lac de Bonnet District to Winnipeg. It is understood the plans of the promoters have also something to do with the development of the water power on Winnipeg River.

MACHINERY MARKETS.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, July 15, 1904.

THINGS on the machinery market are moving along the even tenor of their way. One large order has been closed by a local firm for a complete machine shop equipment for the Northwest. Otherwise there has been nothing of importance.

Machine tools have a very fair demand, and several orders for them have been closed during the past week or two.

The demand for engines and boilers continues steady.

Wood-working machinery is not now so much to the front as it has been.

Gasoline engines seem to be holding their own in point of demand.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street, Montreal.
Montreal, July 14, 1904.

Unusually hot weather recently seems to have caused a lull in the machinery business this week. On all sides a quietness prevails that can only be attributed to the depressing effect of the weather, and the fact that the holidays have set in in earnest. However, the amount of business done is not a typification of the state of the market, as prospects for business were never brighter. A good many fair-sized purchases are in view for the near future, and dealers are not at all anxious. Orders received this week were mostly of small amount. Very little machinery has been shipped, although supplies are moving well. Inquiries are not so numerous, but taking the season into consideration the machinery business is in a satisfactory state.

The Toronto Silver Plate Co., Limited

SILVERSMITHS and MANUFACTURERS
of ELECTRO SILVER PLATE
of every description.



No. 205.—Sterling Silver Tea Set Embossed.

NOT IN THE TRUST

See our New Designs before placing your orders elsewhere,
If you do not you will probably be very much disappointed.

Write For
Our
Catalogues

Factories and Salesrooms:

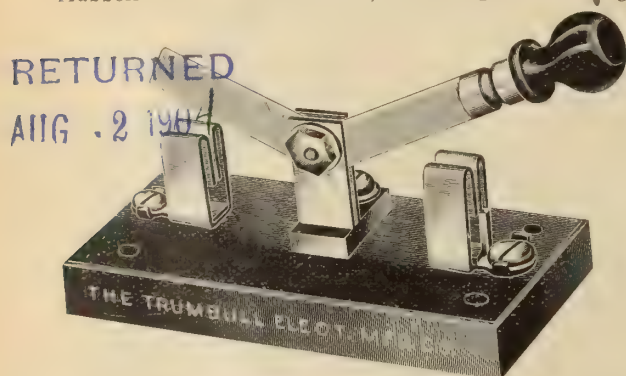
West King St., - TORONTO, CANADA.

E. G. GOODERHAM, - MANAGING DIRECTOR.

ELECTRICAL GOODS AND SUPPLIES

Electrical Specialties.

IN the electrical supply business new apparatus is being designed to a greater extent than in almost any other line. This is due not only to the comparative newness of the business, and the breadth of the field which it covers, but also to the demands that are constantly arising for novel features. The promptness with which these demands are filled, and the efficiency and durability of the apparatus placed in the market, go to show how alert are the manufacturers of these goods to satisfy the public needs. Two new features are illustrated in this issue, one of them, the Trumbull magneto and battery switch, manufactured by the Trumbull Electrical Mfg. Co., of Plainfield, Conn., and the other, the H-G pull switch, is manufactured by the Hubbell-Grier Electric Co., of Bridge-



Magneto and Battery Switch.

port, Conn. Both of these are handled in Canada by the R. E. T. Pringle Co., of Montreal.

The magneto and battery switch is for gas and gasoline engines. The construction of this switch is such that it is impossible to miss an ignition, thereby losing a stroke of the engine when throwing in the magneto, or fresh set of batteries. The metal parts are of copper, mounted on a black enamel slate base, which is 2x4 inches.

In the early days of electrical industry the key socket, which is now so generally used, was designed after the pattern of the ordinary gas key. The electrical business has advanced with rapid strides, but very little improvement has been made in this antiquated device. The ordinary key socket is generally placed in such a position that it is inconvenient, or too high to reach with ease. The pull socket has been designed to obviate these difficulties.

The contact is quickly made and quickly broken, have large sliding surface, and are simple and strong in construction. The chain will stand a breaking strain of 30 lbs., any length of which may be attached without the use of tools. The chains may be shortened by cutting off the required length, removing shell, threading chain through eyelet in shell, and placing the end ball of chain in hook in segment. One pull of the chain turns on the light, and the next extinguishes it. The use of this socket in many cases makes the wall switch unnecessary, thus saving the expense of wiring,

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Assd.



H. G. Pull Switch.

as well as avoiding the annoying feature of defacing the walls.

Installing Bells, Alarms, Etc.

THE hardware merchants who have been taking an interest in this department, and who have been following the suggestions given here and in other departments of the paper regarding the handling of electrical goods in the hardware store, will be pleased to notice among the reviews of technical books, on page 10 of this issue, that of a book on "Domestic Electrical Work," giving practical information for the installation of electric bells, alarms, and annunciators.

It requires no previous knowledge of electricity to read and understand this book; the language is simple and instructive, and the diagrams explain themselves. By simply following the rules, suggestions and diagrams given anyone round the hardware store,

whether he be the plumber, the tin-smith or the clerk, should have no trouble in installing any system of electric bells that might be required. This being the case, there is every reason why the hardwareman should not only carry electric bells in stock, but also work up a good connection for installing them.

Care of Motors.

TO insure smooth running and long life, a motor should be given proper care. Many motors are neglected and let run any way at all, and the consequence is that the greatest efficiency is not obtained from them.

An important point to be regarded is the pressure the brushes bear with against the commutator. Should the pressure be too little, the brush will not cling to the commutator, and arcing will occur, the continuance of which is a source of injury to the commutator. The arc may be very small to begin with, but if it is allowed to continue the brushes are worn away by the action of the arc, until finally the commutator is injured or the fuse is blown. Then, again, the brushes should not bear with too much force on the commutator, because of the extra amount of friction thus set up between the brushes and the commutator.

Too slight pressure is not the only cause of the formation of arcs between the brushes and the commutator. Incorrect position of brushes often occasions arcing; "flats" upon the commutator; partial contact of the brushes and dirty commutators are also causes for arcing.

The correct position for the brushes is generally marked by the manufacturers, and it should be seen that the brushes are in that position. Should the arcing be occasioned by "flats" on the commutator it would be necessary to have the commutator turned up. The partial contact of the brushes may be remedied by sandpapering the high parts of the brushes. The remedy for dirty commutators is to clean them. This can be best done with a dry cloth.

When motors are in dusty places a bellows should be used occasionally to blow off the dust. A vigorous blowing around the brushes, through the fields and armature should be of service in making the motor run smoothly.

In starting a motor the resistance should not be cut out too quickly, as charring of the insulation in either the armature or field wires is sure to follow. Nor should a motor be overloaded beyond the designs of the maker, for the same reason.

We make Electric Fixtures, Sockets and Cut-Outs

Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.

A PROFITABLE SIDE LINE

An Article
of General Utility.

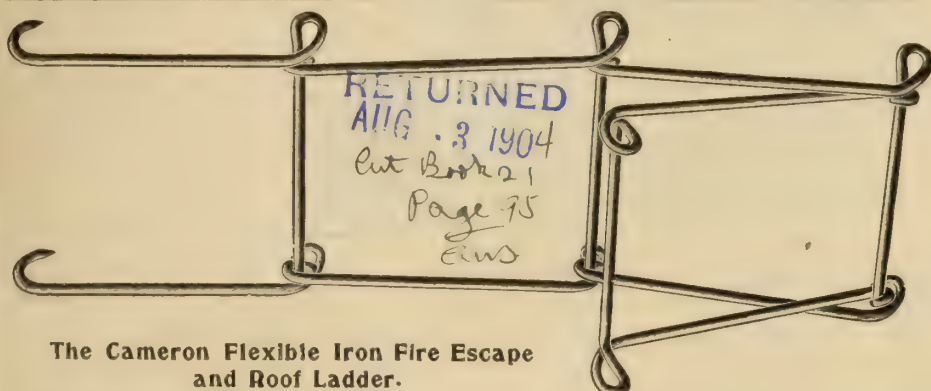
Sanctioned by both Canadian and
American Fire Experts

Write for particulars and prices to

Rogers & Nicoll,

DOMINION SALES AGENTS,

PERTH, ONT.



GUELPH CARRIAGE TOP CO.

Guelph, Ontario

Manufacturers of

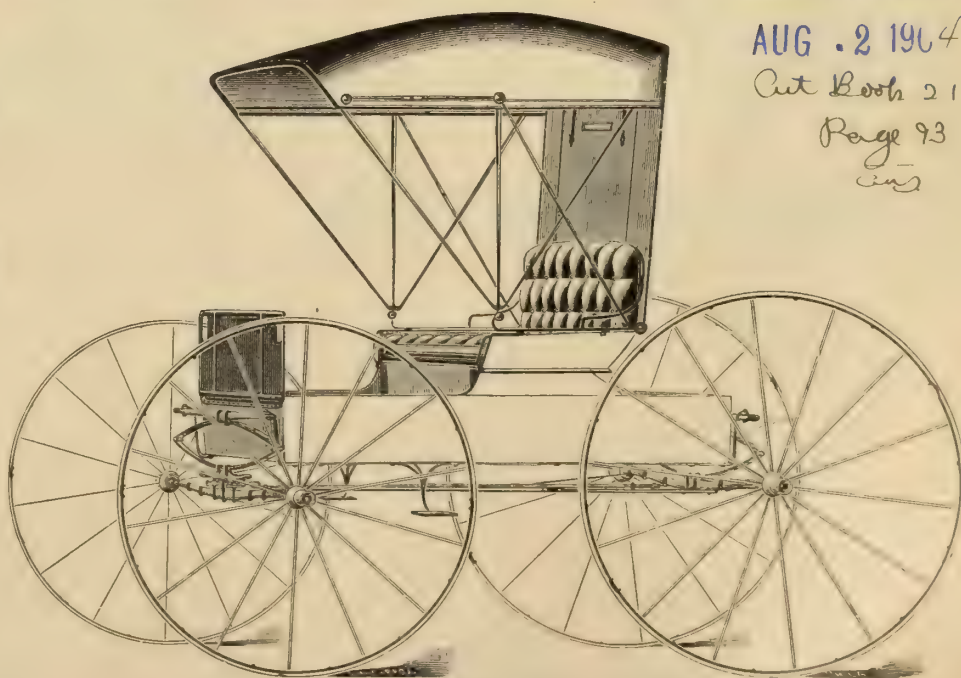
**Carriage Tops,
Bodies, and
Trimmings**

of every Description

and Dealers in
**Carriage Hardware,
Trimmings, etc.,
Axles and Springs**

Write for Catalogue

**Guelph
Carriage Top Co.**



Buggy in the white, ready to paint

.. FULL STOCK ..

Salt Glazed Vitrified

Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.

PORTLAND CEMENTS

Best German, Belgian and English
Brands.

FIRE BRICKS
FIRE CLAY
FLUE LININGS
DRAIN PIPES
HARD WALL PLASTER
CALCINED PLASTER
WHEELBARROWS
MORTAR STAINS.

A Full Stock of Builders' and Con-
tractors' Supplies.

W. McNALLY & CO.

40 to 52 McGill St (Cor. Wellington St.)
MONTREAL.

Write for our quotations.

A PERMANENT
and Handsome Roof.

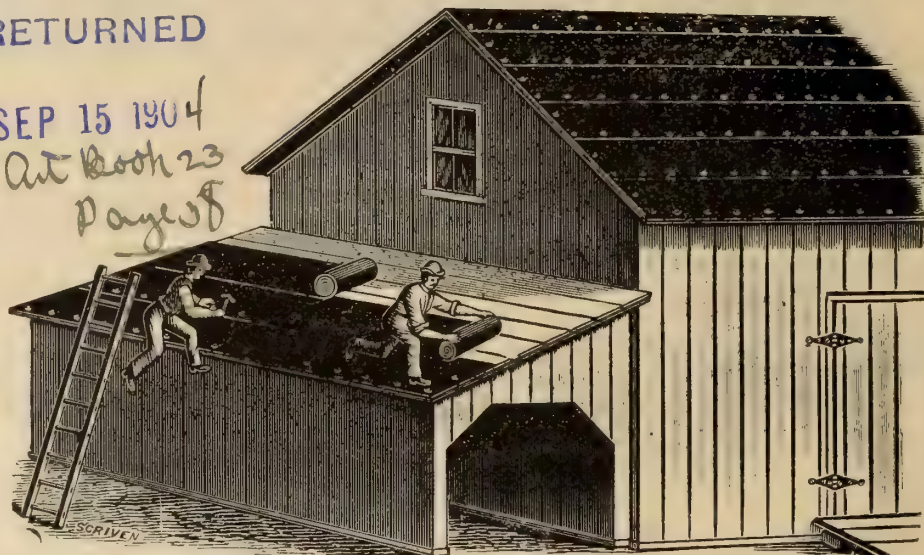
**Arrow Brand Asphalt Ready Roofing.**

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL
Sole agents being appointed in each district. Write to-day.

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**USE MICA ROOFING**

For Flat or Steep Roofs. It is Waterproof, Fireproof, quickly and very easily laid, and cheaper than other roofing.

HAMILTON MICA ROOFING CO.,

60 Catherine Street North,

HAMILTON, CANADA.



"FIRE"
WILL NOT SPREAD, AND
SPARKS OR CINDERS HAVE
NO EFFECT ON

**REX Flintkote
Roofing.**

It is the most fire-resisting
roofing known, and it is en-
dorsed by fire underwriters
everywhere as possessing
the most fire-resisting quali-
ties. On this account, es-
pecially, it is fast replacing
shingles and becoming the uni-
versal roofing. It is durable,
waterproof, economical, and
anyone can lay it. Our sam-
ples and book that tells all about
roofing is yours for the asking.

J. A. & W. BIRD & CO.,
47 India Street, Boston, Mass.



"LOOK FOR THE BOY" ON EVERY ROLL

Furnace Cement

Have you had trouble in getting
something good? Something that
would do perfect work? Something
that wouldn't dry out or burn out?

**Sterne's Asbestos
Furnace Cement**

is the best cement you ever had
brought to your notice. We are
ready to prove this statement. We
give you back your money if you do
not agree with us.

Send for pamphlet and guarantee.

G. F. STERNE & SON, Mfrs.
BRANTFORD, ONT.

ATKINS HIGH-GRADE, CROSS-CUT SAWS

OUR VICTOR, TUTTLE TOOTH AND SEGMENT GROUND SAWS ARE THE FAVORITES IN THE CAMPS

ARE SUPERIOR TO ALL OTHERS IN MATERIAL, TEM-
PER, WORKMANSHIP FINISH AND CUTTING QUALITIES.



E. C. ATKINS & CO.,
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Factories and Home Office : INDIANAPOLIS, IND., U.S.A.

LEADING MANUFACTURERS OF HIGH-GRADE, CROSS-CUT, HAND, BAND,
CIRCULAR, HACK, BACK, WOOD AND SMALL SAWS OF ALL KINDS

Write for Catalogue and Prices

C. D. TEN EVCK, Sales Agent for Canada. Toronto Office : 30 Front St. East. Tel. Main 1896.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

FIRE did damage to the extent of \$10,000 to the sash and door factory of Masson & Hodge, Montreal, recently.

* * *

The factory employes of the Gutta Percha and Rubber Mfg. Co., Limited, Toronto, with their friends to the number of 900, held their seventh annual picnic to Olcott Beach, N. Y., recently. A programme of games furnished amusement and excitement. The picnic is an annual outing given the employes by the firm.

* * *

The firm of McNeil Bros., iron manufacturers, New Glasgow, N. S., will locate in Hawkesbury on the condition that their plant be exempt from taxation for a term of years, and that they will receive a bonus of \$5,000. The plant McNeil Bros. propose to erect will cost about \$35,000, and employment will be given to about 50 men.

* * *

At the annual meeting of the Maritime Copper & Reduction Co., held in Halifax recently, the following officers were elected: President, George H. Trueman, of Moncton; secretary, Claude W. Price, of Moncton; treasurer, George McSweeney, of Moncton. The works at Goose Creek, St. John County, will be opened up by this company within a short time.

* * *

The Canadian Pacific Railway Co. has decided to give up all its shops on Delorimier avenue, Montreal, and will concentrate its entire works at the new plant at Hochelaga. The Delorimier shops were the first ones established in the city by the Canadian Pacific, and in them was constructed a very large portion of the company's present equipment. With possibly one exception they were regarded as the largest of their kind in this city.

* * *

The International Nickel Co., who own or control extensive nickel properties in Ontario and New Caledonia, have issued a report for the year ending March 31, 1904. The report is condensed as follows: Earnings from constituent companies, \$936,471; other income, \$29,754; total, \$966,225; general expenses, \$112,-

185; interest, \$512,938; total, \$624,123. The net balance was \$311,102, carried to the surplus account. The president's report showed that the reconstructed works at the Canadian Copper Co.'s plant were not in full operation. By improved practice the hope is to still further reduce the cost of the finished product. Foreign and domestic contracts at present on hand will insure, for several years to come, the same tonnage as was turned out during the year ending March 31.

NOTES.

The new saw mill of O. B. Robinson, Port Arthur, Ont., has started operations.

The saw mill of Robinson-Wright Co., Shulee, N. S., has been destroyed by fire. It will be rebuilt in the Fall.

The Northern Land & Lumber Co., Port Arthur, Ont., propose to increase their facilities by the erection of a new planing mill.

It is said that the building vacated by the removal of the Canadian Tin Plate Co. from London to Hamilton, will be occupied by a featherbone concern.

The Canadian Pacific lumber mills at Port Moody, B. C., 12 miles from Vancouver, have been totally destroyed by fire. The loss is estimated at \$125,000, with \$75,000 insurance.

S. G. Painter, manager of the Colonial Copper Co., who own copper mines at Cape D'Or, N. S., says that the output of their works there will soon be doubled. At present the production amounts to 200 tons of ore per day.

A company has been organized in Pembroke, Ont., with an authorized capital of \$20,000, to erect and carry on a machine shop and foundry in North Bay. They are asking exemption from taxation and free water service for a term of from ten to twenty years.

The Montreal Smallwares Co. have purchased the pin manufacturing business of MacGregor-Gourlay Co., Limited, Galt, Ont. These are the only pin works in Canada. The plant will still be carried on at Galt, for a time at least.

The Canadian Smelting Works at Trail, B. C., have been started. There are manufactured completed lead prod-

ucts. Lead pipe is being turned out, and very soon plans will be completed for the manufacture of sheet lead machinery.

COMPANIES INCORPORATED.

The Birtle Cement Building Block Co., Limited, Birtle, Man.; capital, \$5,000; purpose, to deal in cement building materials of all kinds; directors, J. Patterson, J. Clemens, E. J. Wilson, H. A. Manwaring, J. C. Dudley, R. Mitchell, all of Birtle.

The Standard Grain Co., Limited, Winnipeg; capital, \$50,000; purpose, to do a general grain trading business; directors: T. E. M. Banting, Oaklands, Man.; C. C. Smith, Carnduff, N. W. T.; J. C. Brown, F. W. Robinson, both of Winnipeg; and A. Laycock, Foxwarren, Man.

Souris Gas Co., Limited, Souris, Man.; capital, \$19,000; purpose, to carry on the operations of a general heating and lighting company; directors: W. G. McLaren, A. J. Stewart, J. Dolmage, C. W. Miller, J. H. Bartlett, T. L. Arnett, Geo. McCulloch, A. Curry, all of Souris.

The Manufacturers' Lumber Co., Limited, Winnipeg; capital, \$1,000,000; purpose, to manufacture and sell lumber and lumber products by wholesale and retail in Manitoba, the Northwest Territories and British Columbia. A large number of leading manufacturers in Winnipeg and other parts of the west are interested.

The Canadian Michigan Gold Mines, Limited, Sault Ste. Marie; capital, \$1,000,000; purpose, to carry on in all its branches the operations of a mining, milling, reduction and development company; directors: Wm. Coyne, C. J. Brown, J. A. McPhail, all of Sault Ste. Marie; J. B. Spellman, Webwood, Ont.; S. B. Sutton and O. Supe, Sault Ste. Marie, Mich.

LICENSES GRANTED.

The Empire Elevator Co., Limited, incorporated by the Dominion Government; purpose, to carry on their business in Ontario.

The Eldorado Mining Co., incorporated in the United States; purpose, to carry on business of mining company in Ontario, provided that a larger capital than \$30,000 is not used.

Underwriters' Salvage Co., of New York, incorporated in the United States;

purpose, to carry on their business in Canada, provided that a capital of not more than \$50,000 is used.

Nova Scotia Steel Co.

THE Nova Scotia Steel & Coal Co. have leased all the submarine areas outside of the Dominion Coal Co. in Cape Breton and for a distance of ten miles out. Some years ago the Dominion Coal Co. took up areas lying outside those of the General Mining Association, now the Nova Scotia Steel, and to-day the Nova Scotia Steel & Coal Co., blank the Dominion Coal Co. all along its submarine areas. The Nova Scotia Steel & Coal Co. areas now taken up extend from Point a Coonie to the northern extremity of Scatarie, comprising over 100 square miles of coal areas, in which all the important coal seams of Cape Breton lie. Agents of the Nova Scotia Steel & Coal Co. have been going over the ground for some time, and last week paid a visit to the submarine workings of the Gowrie and Blockhouse collieries at Port Morien, getting information which it is said confirms their opinion of value of Cape Breton submarine areas. In taking up these submarine areas the Nova Scotia Steel & Coal Co. are looking to the future rather than to the immediate present, and their stroke now seems to be an important one.

New Method of Building.

A CONSPICUOUS example of a new departure in the construction of tall buildings is furnished by a just completed structure in Cincinnati. The dimensions are of sufficient magnitude to make the test a thorough one. The building is on a corner lot 50x100 feet, and its height is 210 feet above the sidewalk, while the basement goes 12 feet lower in one part, and where the power plant is located, 20 feet. The material of the edifice is almost entirely concrete, reinforced with twisted rods of steel, which serve to take up the tensile strain, the concrete being intended to resist only the strain of compression. This is rather a bold advance along the line of a new idea, which, however, has had some partial and favorable tests in other places, notably in the ordeal of the Baltimore fire.

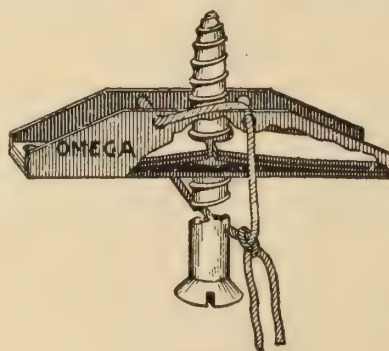
The employment of material in the work is as follows: The concrete is made of high-grade Portland cement, with clean sand of various sized grains, and crushed stones. It is made semi-fluid by mixing with water, thus insur-

ing adhesion to the twisted steel bars. Wind bracing has been carefully looked after. The building in question has confounded the prophets of disaster, who predicted that it would never reach the height prescribed in the plans, or if it did it would disintegrate, and fall in pieces by shrinkage cracks.

None of these foretold disasters has been experienced. The structure seems as firm as though some great glacial movement had deposited it there and left it.

The Omega Toggle.

IN the toggle shown herewith for use in hollow brick, tile, etc., the head is fitted with adjustable springs to fit different threads. Ordinary wood screws, either Nos. 10 or 12, or any length, can be used. No nuts are required, and there is no cutting to be done. Round or flat head brass, nickel or bronze screws can be used. Two springs are riveted on each end of the head and



meet in the centre over the hole the screw passes through. The ends of the springs are punched out in a semi-circle, the four springs engaging the thread and body of the screw, clamping it tightly with an outward stress; the screw may be pushed in or screwed in or out with the fingers, but cannot be pulled out. The spring is used to hold the lead in the wall while the screw is being adjusted. These toggle heads are manufactured by the New Jersey Foundry & Machine Co., of 9 Murray Street, New York.

KNOCKING IN A HARDWARE STORE.

"I HAVE no use for you," said the Vise to the Hammer. "You are too much of a knocker for me."

"Shut your jaws," retorted the Hammer. "You talk too much. Why don't you emulate the Tack, and go to the point?"

"You fellows are jealous of each other," put in the Poker. "The Door Bells wouldn't speak to either of you. But how sweet they are to me."

"They are only playing with you," said the Hammer. "They have to play Poker. Ha! Ha!"

"Don't get off your handle," the Poker returned. "I would like to dress all of you down," put in the Plane. "The idea that the Bells of this outfit would look on any of you," sneered the Tongs, who prided himself on his graceful legs and shinning knob. "Why, the, can have the pick of the store."

"Do you mean the Toothpicks in the showcase, or the Pickaxes under the counter?" asked the Buckle.

"Don't stick your tongue in so glib," retorted the Tongs.

"You're all legs," said the Spider.

"But no spider-legs, thank heaven," snapped the Tongs.

"If the Sledge has nothing else to do," suggested the Spade, "perhaps he will hit the Anvil and make it sing."

"That's enough from you, you old grave-digger," answered the Anvil. "I heard a conundrum on your cousin the other day. It is this: Why is a Shovel like Atlas?"

They all gave it up. "Because it lifts the earth."

"That's good," said the Bellows. "Here is another: Why is the Electric Fan like J. P. Morgan?"

"If you had said the Garden Hose," remarked the Lawn Mower, "I would have answered: Because it pours so much water into the streets."

"Because it can raise the wind," explained the Bellows.

"Don't talk about wind, you old blow-head," growled the Anvil. Just then the Thermometer took a drop and it froze them all into silence.—Ex.

AN EXCELLENT SHOWING.

Notwithstanding the fact that E. W. Gillett Company, Toronto, were put out of business completely for a short time, owing to their entire plant, including stock and machinery, being destroyed by fire on the night of April 19, 1904, dividend checks were mailed promptly as usual to all stockholders on July 14. This dividend was for the period extending from April 1 to June 30.

L. J. Desilets and Anna Guguy have registered under the style of L. J. Desilets & Cie., general merchants, St. Gertrude.

CHARLES BAYNES, England.
 MAKER OF THE KNUZDEN BROOK, BLACKBURN,
"CLICK-CLACK"
 HACK SAW BLADES.
 In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited

HANOVER, ONTARIO.

Manufacturers of the Celebrated **"Saugeen Brand"**
 OF PORTLAND CEMENT.

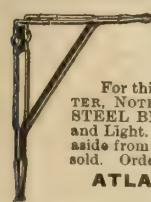
Prices on application.

"THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export. With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables—Emlyn Engineering Works
 "Machinery," Newport. NEWPORT, MON., ENGLAND



Will Hold Up a Shelf !

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,

New Haven, Conn., U.S.A.

To Manufacturers' Agents

Hardware and Metal has inquiries from time to time from manufacturers and others wanting representation in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of inquirers in our various offices throughout Canada and in Great Britain without charge.

Address

Business Manager

HARDWARE AND METAL
 Montreal and Toronto



METAL SKYLIGHTS and WINDOW FRAMES

Glazed with FIREPROOF GLASS.

CORRUGATED IRON and FIREPROOF DOORS

ROOFINGS, CORNICES and CEILINGS

A. B. ORMSBY LIMITED,

MANUFACTURERS AND CONTRACTORS.

Cor. Queen and George Streets,

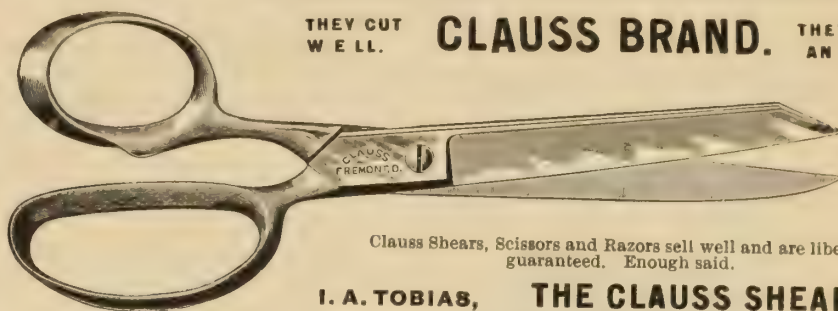
TORONTO, ONT.

PIG IRON

FOR IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.



THEY CUT
 WELL.

CLAUSS BRAND.

THEY HOLD
 AN EDGE.

Clauss Shears, Scissors and Razors sell well and are liberally guaranteed. Enough said.

I. A. TOBIAS,
 Canadian Agent.

THE CLAUSS SHEAR CO.,
 169 Spadina Ave., Toronto, Ont.



Pedlar's "Perfect" Metal Lath

CHEAP AS WOOD

Delivered to any railway station in Canada, for 10c. per square yard. Discount to dealers. Circulars and samples on request.

Pedlar People, Oshawa, Can.,
 or 767 Craig St., Montreal,
 Que.

UP-TO-DATE HEATERS

Air-Tight Top-Draft Single Wood Stove Heaters



Telephone City Wood Stoves
Single and Double Heaters

Points of Merit

Telephone City Stoves are the cheapest, quality considered.

The **outer top draft** tube is a valuable improvement, giving much better draft and control than a low draft.

The outer draft tube cannot burn out nor be damaged when putting in fuel.

The opening on top for wood is the largest of any air tight stove on the market. Large knots and chunks can be inserted without trouble.

The entire top is easily removed for the changing of the steel lining, when that is necessary. The lining of the Telephone City Stoves is four gauges heavier than others and will last longer.

The top has an arrangement by which cooking can easily be done and sad iron heated also.

The stove will keep fire all night with ordinary care.

The fire is easily and quickly made, and heat secured in a wonderfully short time.

Telephone City Coal Heaters

Outer Top Draft, simple, effective, instantly controlled.

Shaking Draw Centre Grate, unusually "open" — no chance for clinkers.

Removable Top. A new fire pot can be put in easily when needed.

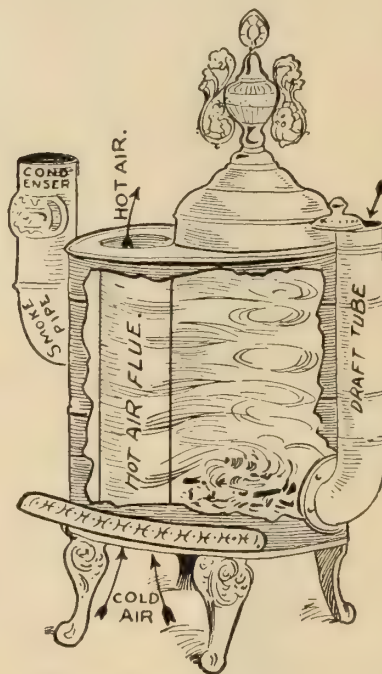
Fire Pot, of good capacity, with air space around it.

Gases are Consumed.

It has an effective check draft also.

Has a good-sized ash pan.

Will burn hard or soft coal or coke.



**Double Heater
Wood Stove.**

Hard or Soft Coal Top Draft Heaters



Dealers Delighted

They say:

- "Customers delighted."
- "Telephone City Stoves are 'O.K.'"
- "Giving entire satisfaction."
- "They are marvels—giving surprising results."
- "Am well satisfied with them."
- "The best of their kind."
- "Reserve agency for us."
- "Had solid comfort all that awful last winter."

**Apply for their sale
NOW.**

TELEPHONE CITY STOVES, LIMITED

BRANTFORD, ONT., CAN.

STOVES AND TINWARE

Heating Values of Fuel.

IN speaking of the heating value of any substance, it is customary to consider it as being the number of British thermal units given out by the total combustion of one pound of that substance.

A British thermal unit (B. T. U.) is the quantity of heat which will raise one pound of water through one degree Fahrenheit at or near the maximum density of water, which is 4 degrees Cent. or 39.2 degrees F., converted into mechanical energy. 42.416 B. T. U. are equivalent to one horse power.

There is a vast difference in the amount of heat given out depending on whether the fuel used is reduced to carbon dioxide or only carbon monoxide. Taking pure carbon, for instance, one pound of it burned to carbon monoxide gives out about 4,000 B. T. U., while the same if reduced to carbon dioxide gives out 14,000 units, which shows where the discrepancy occurs in the results that are often obtained in practice, to what might actually be effected. Thus the imperfect combustion of the gases evolved in a stove or furnace, and the passing off of available hydrocarbons is the great cause of loss of economy in heating.

The temperature at which fuels burn varies greatly with the supply of air. The greater that amount the lower the temperature of combustion, but they are approximately the same under similar conditions. It might be interesting to note the temperatures given by M. Pouillet, of fire at different stages, which list would enable one to judge the temperature by the appearance of the fire. When the red glow is just visible the degree of heat is 977 F.; a dull red, 1,290 degrees; dull cherry red, 1,470 degrees; full cherry red, 1,650 degrees; clear cherry red, 1,830 degrees; deep orange, 2,010 degrees; clear orange, 2,190 degrees; white heat, 2,370 degrees; bright white, 2,550 degrees; and dazzling white, 2,730 degrees.

The fuels commonly used, which are coal, coke, wood, petroleum oils, petroleum and gas, vary greatly in their calorific values. Of these for equal weights petroleum oil is the greatest, then comes gas, followed by petroleum, coal and coke, with wood last. Far and beyond any of these as a heat producer is hydrogen, but as it does not occur

alone, and as its production is limited and its use only for special purposes, it need hardly be considered with the others.

Good anthracite coal contains from 2 to 3 per cent. moisture, 3 to 4 per cent. volatile matter, 88 per cent. fixed carbon, and 1.5 to 7 per cent. ash. Bituminous coal contains about the same amount of moisture, but the great difference between the two is in the much greater amount of volatile matter present in bituminous, and the correspondingly less fixed carbon. It contains 25 to 35 per cent. of volatile matter, 50 to 65 per cent. fixed carbon, and 5 to 10 per cent. ash, with just a trace of sulphur. Coke on analysis shows from 88 to 92 per cent. fixed carbon and about 8 to 12 per cent. ash, and weighs about 40 lbs. per bushel. Ordinary firewood contains 25 per cent. moisture, and is composed of carbon 37.5 per cent., hydrogen 4.5 per cent., oxygen 30.75 per cent., nitrogen, 75 per cent., and ash 15 per cent. Desiccated wood, from which all the moisture has been evaporated, therefore, contains one-third more of the constituents mentioned than does ordinary wood. Petroleum contains on an average 84.7 per cent. carbon, 13.1 per cent. hydrogen, and 2.2 per cent. oxygen. White petroleum oil contains no oxygen but only carbon and hydrogen. The constituents of gas and the heating facilities very greatly depend upon the nature of the gas, whether it is natural gas, coal gas, water gas, or producer gas.

The heating values of the different substances may be compared. One pound of petroleum oil gives out 27,500 B. T. U.; gas, 21,500, and petroleum 20,000. Average coal has been found to produce 15,000 units, and coke 13,500 B. T. U. Wood comes last with 7,000 to 11,000 units to its credit.

In our town and country districts wood is the fuel most commonly used. When green it contains from 30 to 50 per cent. moisture, and after a year in the open air from 20 to 25 per cent. The fuel value of the same weights of wood of all kinds is practically the same, and it is important that the wood be dry. In steam boiler tests, wood is assumed to be two-fifths the value of the same weight of coal. Average pine weighs 2,000 lbs. per cord, and is equal to from 800 to 925 lbs. of coal. Poplar,

chestnut and elm weigh 2,550 lbs. per cord, equal to about 1,000 lbs. of coal. Beech, red and black oak weigh 3,250 lbs. per cord, and of equal value to about 1,400 lbs. of anthracite coal. Hickory and hard maple weigh 4,500 lbs. per cord, and are equivalent to 1,900 lbs. of coal. A cord of wood is 128 cubic feet, of which about 56 per cent. is solid wood and 41 per cent. space.

Hints Regarding Stove Troubles.

IN the catalogue just issued by the Burrow, Stewart & Milne Co., Hamilton, the following useful hints are offered to the trade:

"All stoves or ranges made from the same patterns are exactly alike. If one works well, all others will work just as well under the same conditions. If a dealer sells a stove and it does not work well, he may know at once that the fault is not with the stove, provided other stoves of this pattern sold by him have given satisfaction. If a stove or range does not work satisfactorily, the dealer should not write to the manufacturer, but proceed at once to ascertain what the trouble is, and remedy it, before the housewife becomes disgusted with her purchase.

"A careful examination of the chimney should be made before the stove is connected with it. This would often save time and expense.

"The top of chimney should be higher than any other part of the house or immediate surroundings—the higher the chimney the better the draft.

"The chimney should be free from soot and all obstructions, and have a good draft at pipe hole. It is the chimney creates the draft, not the range. The chimney should not be used for any other stove or fire place. All openings into the chimney, either above or below, except the pipe hole for the range, should be closed up tight. If the chimney flue can be closed up tight right below where the stove pipe enters it, the draft will be increased.

"Lead the pipe into the chimney in the most direct way. Use only one elbow if possible, as every turn in the pipe obstructs the draft. Round elbows are much better than square elbows.

"See that the pipe entering chimney is of the same size or larger than collar

of stove, and that no soot from chimney gets into end of pipe.

"See that pipe fits closely on the stove or range and in the chimney, and that the pipe does not go too far into chimney, and that the space around the pipe where it enters the chimney is perfectly tight.

"See that all flues in range are open and clear, so the smoke can freely pass through them, and be sure that all flue stops are in place and tightly closed.

"See that the person using the range thoroughly understands the operation of the dampers. The reservoir damper should always be closed when baking.

"See that the right kind of coal is used and that the flues at the back and bottom of the oven are kept free from dust and ashes. In a coal stove the flues should be cleaned once a week."

About Stoves.

A WRITER in Trade makes a number of observations about stoves, among them the following:

There are only a few women who are satisfied with their stoves.

They either bake too slow or bake too fast, or they do not bake at all.

They bake too quickly on the top or too slowly on the bottom, or vice versa.

If you can convince them that you have a stove that will really do what it is designed to do, you won't have a great deal of trouble in selling it.

When it comes to heaters, the problem is a little more difficult. Then it is generally a question of handsome appearance combined with convenience and reasonable price.

The pretty stoves are the ones to advertise. They are the ones that people do not know about.

Every woman knows that she can go to a stove store and buy a cast iron "cannon" stove, or a little sheet-iron hall-bedroom boarding-house stove, but she doesn't know about the new, nickel plated tile front, open faced parlor stove that you have just received.

That's the thing to tell her about. If you have a portrait of it, put it in the ad, but be sure that the portrait does it justice.

Baseburners are sold more for their convenience and their heating qualities. If you have such a stove that only has to be filled with coal about once a month, and never goes out on cold mornings, that's the stove to advertise.

I believe women buy most of the stoves, or at any rate, they boss the

buying. They also have most of the bother in taking care of a stove after it is bought.

Most men are so busy in the morning that they forget to fill the baseburner before they go down town.

Then the woman of the house has to do it herself.

Naturally the stove that needs attention only once a day, possesses strong attraction for her.

Advice to the Stove Retailer.

THE editor of a local paper in a small Michigan town gives some advice to the stove merchants of the place which every retailer can read to advantage. He writes:

"If the stories of devices for making housekeeping easier are half of them true, it would be a delight to the tired housemistress to find the articles, or information about them, in the hands of our dealers here. One of the things most wanted is a stove that is economical of fuel. Yet our dealers never advertise a stove in which that virtue is claimed to be a prominent one. And the devices for cooking several things over one burner, other than the cooker is piled up in stories like a skyscraper—who ever hears of it? And yet there is said to be such a cooker with a side door. If it is effective, it ought to find a ready sale everywhere. Possibly our dealers know of it, but they never tell about it.

"And how about the device for keeping food hot? We hear about the work it does, but nothing about itself—where it is made, what it costs and who sells it. For knowledge of the improvements in household articles, especially in the kitchen, the housewife is dependent upon the illustrated ads. in the city papers, and then must go on a general exploring expedition to find whether anybody here keeps them. The household magazine was right which said that dealers in hardware made a great mistake in not advertising such articles; women were anxious to get anything of the kind which would save work, and would be glad to know where they could be found. And it might have added that the surest way to draw general custom is to cater to the women's part of the trade, for where women are satisfactorily supplied the men will be sure to follow."

Oil Stoves.

WHILE the stove convention last month at the Waldorf-Astoria, New York, was composed of the makers of cast iron coal burning stoves, not a little discussion took place about the oil stove in the hotel corridors among those who have charge of the selling end of the business, says the Metal Worker. Notwithstanding the great advances made in perfecting an article that has proved a convenience to many housewives, the claim was made that little profit is derived from the sale of oil stoves and of the fuel used in them. Some went so far as to say that the grocer or other dealer who sold the liquid fuel and the manufacturer and the retail dealer who sold the stoves would find on a close calculation of the return for their investments and energy that they were furnishing a large gratuity to the oil producers. This assertion is certainly worthy of verification, and if found correct the manufacturer and the dealer should need no further incentive to remodel their selling prices so that a better return would be secured from this line of trade. There is one obstacle, however, to the achievement of this desirable end, and that is the oil producers have for a number of years secured some medium grade stove and had it manufactured at the lowest possible cost, and have used their large resources to secure its introduction into localities which they thought might be made to develop a greater demand for liquid fuel. As desirable as it may be to increase the revenue from this line of trade, there has been no difficulty in the past in finding some manufacturer with a plant equipped for the production of liquid fuel burning stoves who was willing to take a large order at such a low price from oil producers that when a small percentage was added for distributing the goods the rate at which the latter could sell was still below what would be considered a living selling price by any conservative business man.

The oil stove trade is fast reaching the position that is occupied by the coal stove trade when by far the greatest proportion of the output of the manufacturers is not marketed through the retail dealers, but is put into the hands of consumers at practically the same prices which the dealer must pay for the goods. The goods are purchased from the original manufacturers in large quantities to induce the manufacturers to make such low prices as to create the talk that was heard in the corridors of the Waldorf-Astoria. The season for stove trade, whether for coal stoves or for liquid fuel stoves, covers but a small

GRAND IDEA ^{RETURNED JUL 27 1904} THE RANGE THAT NEVER FAILS



Dealers who are
wise are placing their
orders and receiving
the agency.

Looks Well
Works Well
Sells Well

Made in
four sizes and
sixteen styles.

"KELLY" WARM AIR FURNACE

COAL OR WOOD

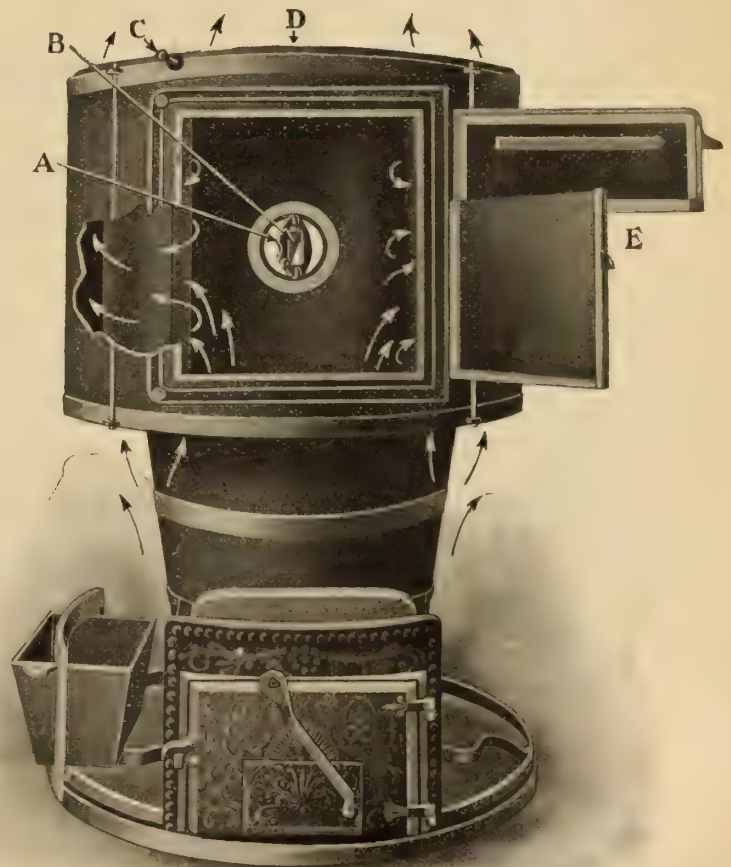
Double Feed Door
Automatic Gas Damper
Direct Draft Damper
Dust Flue

Write for Prices

GUELPH FOUNDRY CO.
LIMITED

Guelph, Ont.

E. G. LOW & CO., - Winnipeg





Pandora Range

Six Sizes.

Burns Coal, Coke or Wood.

The Pandora is now being made in six different sizes and each size can be fitted with reservoir, high shelf and warming closet.

Its special features, such as the double-flue system, triple-triangular grates and enamelled reservoir, are working just as well, if not better, than we at first claimed they would.

We **have made** the Pandora the best working and finest looking range in Canada and **are now making** it the best known.

If you are not handling the Pandora you should secure the agency before it is too late.

Famous Base Burner



Burns Coal Only.

Three Sizes Parlor and Two with Oven.

An exceedingly heavy and durable heater—will last a lifetime.

Nickel dress can be removed without loosening a bolt—easy to handle.

Differs from common base burners in having three flues instead of two—produces just half as much more heat from the same amount of fuel.

The oven has three flues the same as a cook stove and all the fire passes under the pot-holes.

THE McCLARY MANUF

Head Office and Works : London, Ont.

Branch Warehouses : Toronto, Hamilton, Montreal,

Sunshine Furnace

Made in Five Sizes and Two Styles.

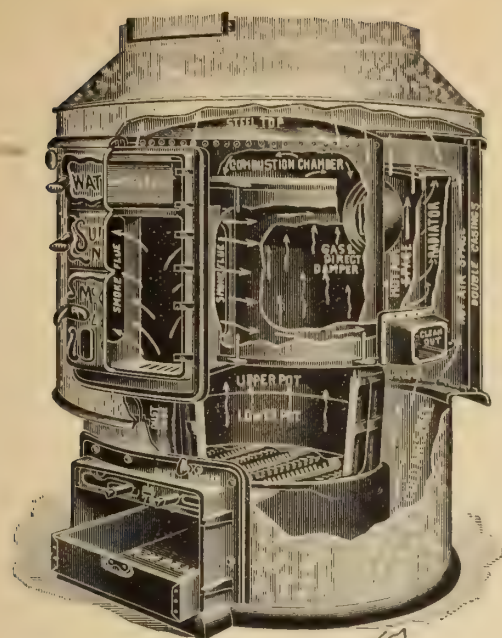
Burns Coal, Coke or Wood.

The "Sunshine" still holds its place as the best hot-air furnace in Canada, and its sales continue to increase.

Testimonials from well-pleased users of the Sunshine Furnace are coming in every day.

Our advertising is still running in the papers and helping our customers to sell "Sunshines."

Are you among the lucky ones who are taking advantage of all this publicity? If not, you should arrange to be.



Famous Magnet Furnace

17 Styles and Sizes

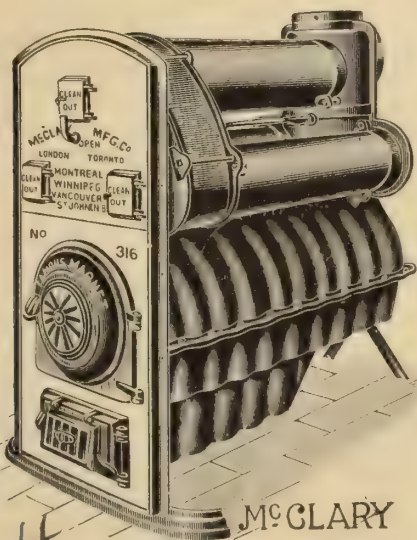
Burns Wood Only.

The Famous Magnet is built in sizes to suit the smallest house or the largest public building.

Has been our leading wood furnace for a long time and has always given complete satisfaction wherever placed. Unsolicited testimonials are coming in every day from satisfied users.

The radiator tubes, fire box, dampers, etc., etc., are made in the most modern way and the furnace is very simple to operate.

You have our unconditional guarantee behind you when recommending this furnace to your customers.



ACTURING COMPANY

Branch Factories : Hamilton, Ont., and Montreal, P.Q.

Winnipeg, Vancouver, St. John, N.B.

portion of the year, and instead of being looked upon as a standard article to be sold at a narrow margin of profit stoves should be treated as specialties and should bring specialty profits. Throughout the country there are very few establishments at the present time in the retail trade who can confine themselves entirely to the sale of stoves from the fact that there is not enough business in this line to occupy a good working corps throughout the entire year. The stove manufacturer and his salesmen can do no better service to all concerned than to take up a campaign of educating all who sell stoves to look upon them as specialties for which the selling price should bring a more satisfactory profit than has been secured in the past.

Mica.

By J. C. B., in *Electrical Engineer*.

FROM a geological point, mica, slate and gneiss are the oldest stratified rocks that we are acquainted with. That it was known in past ages is evident from the many marks of ancient operations to be found in mines, and in so many places, for the material was employed for windows, mirrors and ornaments in the early days. In some form or other mica exists all over the earth; it may be found in granite and quartz, rubelite, green tourmaline, feldspar, lepidolite and many other minerals. It varies in color from white through green, yellowish and brownish shades to black, and its color is greatly influenced by the mineralogical peculiarities of the rock in which it occurs or has been associated, and its commercial value varies also with these circumstances.

One of the most important properties of mica, and one on which its value depends, is the remarkable property of lamination, its structure being so perfect that it is possible to divide it by cleavage into leaves 1-250,000 part of an inch. In consequence of its powerful insulating property, and also the very great advance made in electrical industries, the demand for mica at the present day in almost every country is so great that the supply is almost inadequate. It is not only the superior insulating property of the mineral that gives it such an advantage, but its characteristic and peculiar structure which makes it so adaptable as an insulator, requiring very little machining or shaping. For instance, it is a substance which could not be well replaced as an insulator of commutator segments, for it is not only the best but an efficient insulator under every condition. In the case of the commutator its hardness makes it invaluable, for it wears away

under the friction of the brushes nearly at the same rate as the hard drawn copper of the commutator itself.

Further, the fact that heat has no injurious effect on either its physical structure or insulating property makes it almost indispensable in armature construction, safety appliances and a multitude of industrial applications, such as lamp chimneys, smoke radiators or preventers, and all purposes where transparency, infusibility and toughness are required. As is the case with the incandescent burner chimneys, it is also taking the place of glass in many respects, especially on board ship, where its combined transparency and tenacity enable it to withstand the wear and tear and the concussion of heavy firing. The qualities of elasticity and toughness are properties in which it is not excelled by anything, natural or artificial. These properties are taken advantage of in its employment as an absorbent of nitro-glycerine, and when so used explosions by percussion are rendered less liable, while at the same time nothing is taken from the nitro-glycerine; and for such purposes the pulmose mica is used, or that kind in which the scales are arranged in a feathery form.

The unalterable nature of the substance and its resistance to the corrosive action of acids, smoke and dust make it also invaluable as a decorative material; the French silver moldings are made with ground mica, which is accomplished by passing the prismatic or foliated material through a mill, which process increases the bulk, forming a mass of translucent and beautiful bean-like scales. Mica is also now being used extensively as a lubricant, and for such purposes it has no superior, except plumbago; it is likewise employed for boiler covering, as roofing material, and as fire proofing for safes, etc. As a reflector of light it has many applications, for it can be readily stamped into any shape. At the present time such reflectors are on the market in very many varieties, being admirably adapted to electric incandescent lamps.

Probably the most interesting and beautiful properties of mica are its optical, which, in connection with polarization of light, are both edifying and instructive. Mica under such conditions is what is called a biaxial crystal, which cleaves perpendicular to the bisector of the angle between the optic axis. Its properties in this respect are used for instructive demonstrations of the property of thin films.

There are so many ways of utilizing scraps and cuttings of this material in the manufacture of other insulating substances, such as micanite, etc., that it

is almost impossible to find any real mica that may be pronounced useless.

Get There or Get Left.

"I don't see," said John Jones, the hardware dealer, "how James Smith gets so much more of the furnace business of this locality than I do. I surely am better fixed to take care of it than he is."

"You make the mistake," said his friend, "in this strenuous age, of supposing that business always comes to those who are most capable of taking care of it. On the contrary, they are generally passed in the race, as in your case, by those who make the most strenuous endeavors to secure same. In other words, present-day commercial success is a case of fight rather than fit."

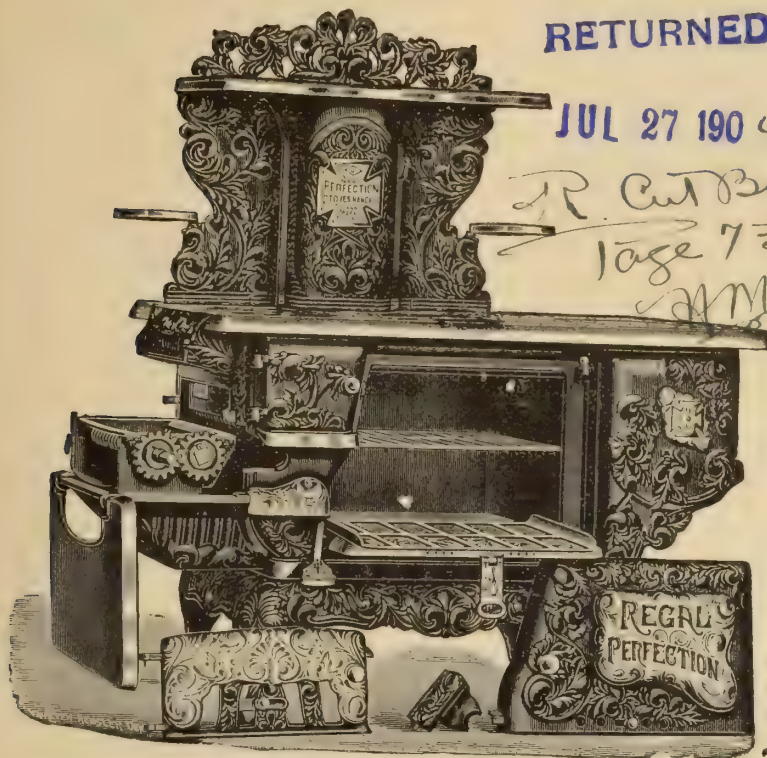
What Asbestos Really Is.

IN the important work of protecting life and property from fire, there is a growing appreciation of the value of asbestos, and a constant increase in its use. It has a combination of properties unlike that of any other substance found in nature. No other product as yet discovered could take its place. It has been called mineral wool, and also the connecting link between the mineral and the vegetable kingdoms. After the fibers of asbestos have been separated from their mother rock they have a fluffy softness and whiteness much like that of wool or cotton, and by a process very similar to that of ordinary weaving, they are converted into cloth. It is a cloth, however, which, owing to its mineral origin, is impervious to fire, and herein lies its value. It is more and more extensively used in this country for fireproof curtains, for firemen's helmets, jackets and leggings, and for gloves and shields for men working at the mouths of furnaces. The texture of the fabric resembles that of canvas, so it is too coarse, as now manufactured, for such delicate materials as those of lace curtains and women's dresses, for which its use has been suggested, but an interesting way in which it is now utilized is in the work of surgeons in making splints and dressing wounds. Cotton and wool must be specially treated to be rendered absolutely clean and antiseptic, while asbestos is naturally so.

The Standard Foundry Co.

The Standard Foundry Co., of Longueuil, Province of Quebec, are issuing a catalogue of ranges and heaters of interest to every stove dealer planning a Fall stove campaign. Several new lines are illustrated and described. Any reader of *Hardware and Metal* may have a copy on request.

"Regal Perfection" Ranges.



"Regal Perfection"—Open view, showing "PATENTED DRAW-OUT GRATE" Feature, Etc.

RETURNED

JUL 27 1904

R. Cut Book 21
Page 73.
AM

A strictly first-class, high-grade, and "up-to-date" range, at a fair price.

Made with 4 or 6 Cooking Holes and in all the different forms.

It will pay you to get our prices.

WE MANUFACTURE a complete line of **Coal and Wood Cookers and Heaters, Air Tights, Etc.**

WRITE FOR OUR
NEW CATALOGUE
AND PRICE LIST.

The James Smart Mfg. Co.

LIMITED

WINNIPEG, MAN.

BROCKVILLE, ONT.

We are among the foremost makers of
Base Burners and Oak Stoves

Made to meet the requirements of Everybody.

But One
Quality
and
that
the
Best



A
Guarantee
Bond
with every
Stove
or
Range

"TREASURE"

Trade Mark
is an absolute guarantee of both
Quality and High Class



The D. Moore Company, Limited, Hamilton, Ont.

Manitoba Depot: Merrick, Anderson & Co., Winnipeg

British Columbia Agency: John Burns, Vancouver

Their Foundry Now Occupied.

A FEATURE of the industrial development of the last year or two has been the establishment of first-class foundries in Ontario. The Guelph Foundry Co., Guelph, Ont., one of the firms to erect new works, have within the last few weeks moved into their new building, a modern foundry in



every particular and large enough to double their output of ranges and furnaces. Every department has been made complete in every way, including an up-to-date nickelling plant, installed by Zucker, Levett & Loeb, of New York.

With a modern plant and a steadily increasing connection in the trade, the company have reason to expect a material expansion of their business. Their capacity is now nine ranges, four heaters and six furnaces.

The company now have representatives in all the provinces west of Montreal. In Quebec and eastern Ontario their interests are looked after by E. McDougall, of Brockville; in western and northern Ontario by O. Vickery, of Toronto; in Manitoba and the Northwest Territories by E. G. Low & Co., Market street, Winnipeg.



In reply to an inquiry of Hardware and Metal, Mr. Doherty said that business had never been better than at present, and he anticipated a big demand during the coming Fall.

As has formerly been mentioned in Hardware and Metal, the special line which this company is pushing is the Grand Idea range. In addition to this

line the firm will make New Idea cooks, heaters and ranges, also their hot water boiler.

Empire Ranges and Furnaces.

IN the nine months since the Canadian Heating and Ventilating Co., Owen Sound, Ont., started operations, they have achieved a large measure of success. The Empire Queen introduced to the trade last December embodies all modern features, and at the same time has a design distinctly its own. While there is no carving on the castings, thus simplifying the cleaning of the range, it has a handsome nickelplated dress, which makes it one of the most attractive ranges in the market, and has won for it widespread popularity in the trade.

The company have recently added to their lines the Empire Princess wood cook, the Empire Special wood cook, and the Empire Oak stoves. They are also making the Empire King coal and wood furnaces, already a popular line.

Like most other enterprising heating goods manufacturers, the Canadian Heating and Ventilating Co. are devoting attention to Manitoba and the Northwest Territories. Arrangements have just been completed by which the Christie Bros. Co., Winnipeg, will handle their goods in that territory.

Expanding as the Demand Grows.

THE firm of the Thos. Davidson Mfg. Co., Limited, Montreal, are recognized as one of the most enterprising firms in the Dominion. Their ever-increasing business demands that they make provision for it, and in consequence they are continually adding more space to their already colossal establishment.

The factory buildings, situated in St. Cunegonde, near Montreal, cover a very extensive area, have about 11½ acres of floor space, which is a veritable beehive, producing their brands of enamelware, now in use in thousands of kitchens throughout the Dominion.

Their fifty years' experience and good work has gained them a business reputation, and their undoubted success has provided one of the finest and most up-to-date facilities for handling large orders.

Not only does the output of this large concern include enamelware, but all kinds of articles in pieced and japanned tinware. Wire goods and immense quantities of lithographed tin signs for advertising purposes are turned out.

The new brand of enamelware which this firm is just placing on the market,

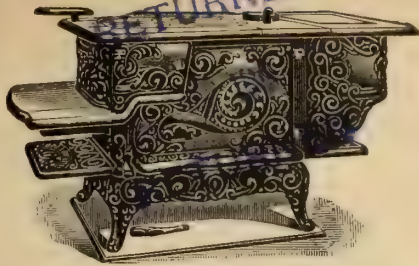
proves conclusively that Canada is prepared to hold its own and is now well able to compete with the world in the production of enamelled steel wire. This comparatively new business has increased so rapidly in Canada that it is now regarded as one of the principal industries of this country.

To always keep the best foot foremost is a rare wisdom, and seems to be a paying policy when the successful history of this firm, with its hundreds of employes and thousands of customers, is taken into consideration. It is to companies such as this one that Canada is indebted for the aggressive enterprise which is placing her in the foremost rank amongst the nations.

Pickle Stains on Sheet Metal.

PICKLE stains have been one of the perplexing obstacles in the production of sheet metal by the rolling mill, and particularly so when their cause cannot be determined. They appear on the sheet after it has been annealed and pickled and occur in the shape of reddish, irregular spots. In the majority of instances the sheet is not injured by the presence of pickle stains, but the consumer is somewhat dubious about the quality of the material when they appear to any extent, and they really are quite unsightly. When pickle stains occur something must be found which causes them, and as a rule the pickle is assumed to be the reason, but unless pieces of iron or zinc happen to fall into the pickle tub the pickle is not responsible. If coal is used for annealing it is generally assumed that this is responsible on account of the sulphur which exists, and to be sure it is in some instances, but not in the majority. Some of the worst pickle stains may appear just as readily when wood or oil is used as in the case of coal.

Recent investigations have demonstrated, says the Metal Industry, that oil is one of the principal causes of pickle stains, and if one is desirous of eliminating them he should investigate this part of the operation. Certain kinds of mineral oils seem to produce these stains. In order to properly investigate the matter let a sheet be taken and soaked in potash solution so that the grease is removed, then carefully rinsed and annealed. If the stains still appear it will be safe to assume that some other cause be looked for, but it is believed that oil is far more apt to produce pickle stains than the majority of people believe. If the difficulty is really attributable to the oil it will generally be found that the use of a pure animal oil will obviate it.



Wood Cooks



Coal and Wood Cooks



Cast Ranges



Steel Ranges



Oak Stoves



Hot Blast Heaters



Concentration

is the Spirit of the Time

Its advantages every man knows.

"Favorite" Stoves and Ranges offer you the opportunity to concentrate your trade on a line that is strong at all points.

We give our whole attention to the making of Stoves and Ranges only, and you have our guarantee that they are correct to the smallest detail, and that they look well, work well and sell well.

We make from the cheapest Cook Stove to the most highly finished Family Steel Range. From the cheapest Box Stove to the most elaborately finished Base Burner.

FINDLAY BROS., Carleton Place, Ont.

Coltart & Cameron Co., Limited, Winnipeg, Man., Selling Agents for Manitoba and Northwest Territories

PIPE THREADING AND CUTTING MACHINE.

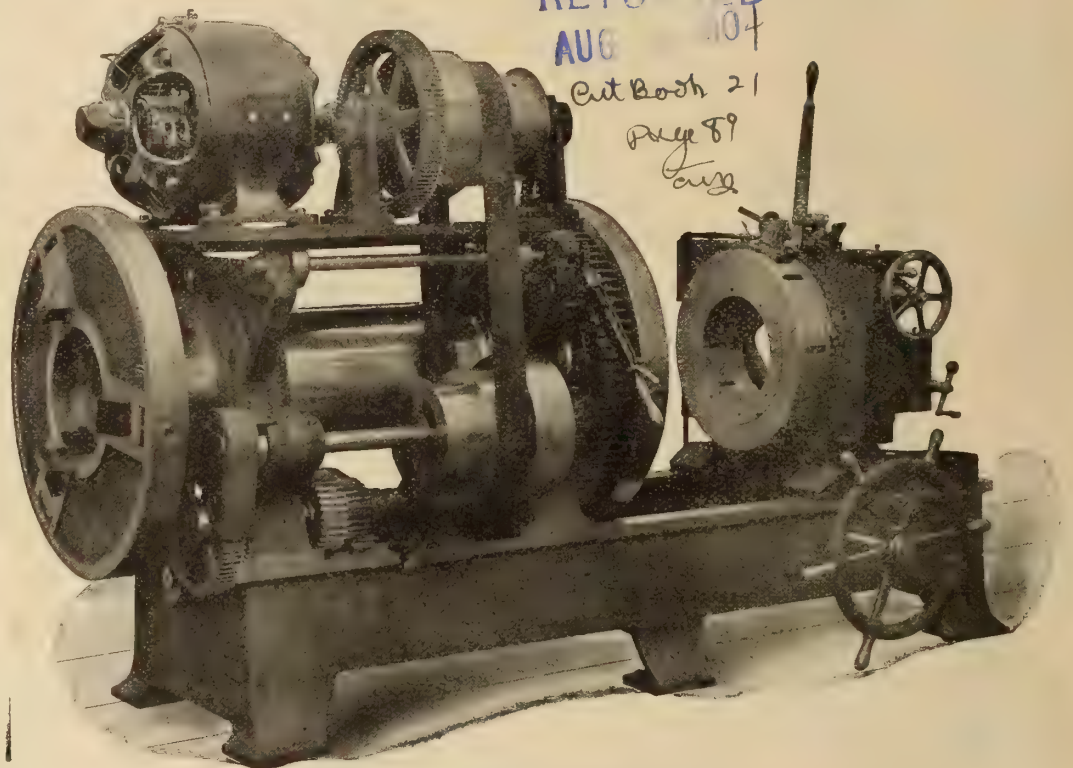
THE machine of which an illustration is given is manufactured by the Bignall & Keeler Manufacturing Co., of Edwardsville, Ill., who are represented in Canada by the Fairbanks Co. This machine is equipped with peerless adjusting mechanism, which is simple and has few parts, and is guaranteed by the makers to be absolutely reliable at all times.

A brief description of this mechanism is as follows: When the hand lever is in a horizontal position, the dies are in a position for the cutting of the thread, and the threaded rod, connecting the bracket on the cam ring with this lever, is in a direct line with it, thus effectually locking the ring in position. When the hand lever is in a vertical position, the cam ring is revolved until the latch on the face of the stand engages the stop nut on the ring. Only one movement is necessary to expand the dies. The adjustments necessary to obtain threads of different gauges, are by turning the hand nut on the end of the screw. This nut is yoked to the bracket on the cam ring, and by turning it in either direction, the ring is revolved and the dies expanded or contracted. As the thread of the nut is of small pitch and the pitch of the cam is slight, an exceedingly small movement of the dies can be obtained, and when once the dies are adjusted, the gauge cannot be altered, except by turning the adjusting nut. When the dies are new they are of such length that they are held in the centres of their respective cams, when adjusted to the correct gauge.

As they wear and are re-cut, and thereby shortened, the adjusting mechanism makes it possible to bring them to the extreme end of the cams, thus allowing for considerable wear before cutting to the next size larger. When the dies are removed from the head the stop-latch is thrown back, allowing the cam ring to revolve into such a position that the openings in the rim are directly opposite the slots in the head, in which the dies are held.

This machine will thread any sized pipe from 2 1/2 to 8 inches. There are

no heavy die heads to handle, and no complicated parts to adjust, but at the same time the machine is rigid, and special attention has been given to all wearing surfaces, which are ample and well babbited. The driving appurtenances are compact and almost entirely concealed within the bed. The gears are all machine cut from the solid, thus insuring their running true and almost noiselessly, while with the shifting gears two speeds can be obtained for each step of the cone. The pipe is firmly held by two three-jaw chucks, one at each end of the arbor. These chucks are identical in design, with the exception of a set of flange gripper jaws



Bignall & Keeler Pipe Threading Machine.

on the rear chuck, which are convenient in making up flanges and flange fittings. The arrangement for cutting off the pipe is practical, the work being held to the tool by self-centring steel faced steady jaws. An automatic oil pump keeps a constant flow of oil to the cutting tool and dies.

The motor with which this machine is equipped is designed to run at constant speed, and the necessary speeds are obtained by the shifting gear, and the cone pulleys. The motor is convenient for oiling, and the starting box is handy to the operator.

A FLEXIBLE IRON FIRE ESCAPE.

Frequently sparks from a fire in a neighboring house or eves from one's own chimney light on one's roof in such numbers that there is real danger. In such cases the householder realizes the advantage of a ladder leading to the roof by which water can be at once carried to the point of danger. Often, too, fire starts in the night when one is in bed and before the sleeper is awakened the passage of escape indoors is cut off and the window is the only road to safety and even there the life is often saved at the expense of broken limbs as a result of jumping. For this reason it is not surprising that there has been a remarkable demand for the flexi-

ble iron fire escape and roof ladder advertised in this issue by Rogers & Nicoll, Perth, Ont. This ladder was invented by a Perth blacksmith and was at first sold to the farmers about this town. The test of time proved its merit and Rogers & Nicoll were induced to take the selling agency for Canada. As the line is one that can be handled to advantage in the hardware store the trade is invited to write for further information to Rogers & Nicoll, Perth.

Davidson's Stove Pipe Elbows



"STANDARD" made in the following sizes.

Inches: 5 6 7 8

A Few Reasons Why our "HERCULES" Elbow is a Winner:

Long in the throat—which insures perfect draft.

No place left for dust and soot to lodge.

Adjustable—readily fitting all makes of pipe. Saves time and labor in putting up. Makes neatest work.

Has all the advantages of the old style elbows combined without any of their disadvantages.

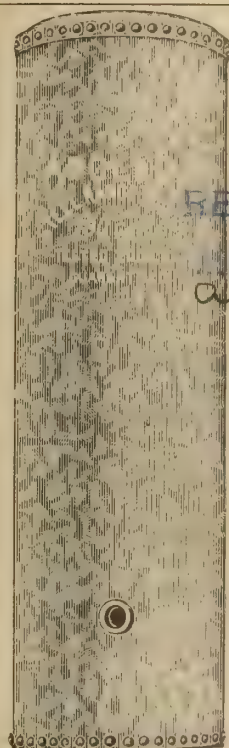
Crated in bundles of one dozen. Safe delivery insured.

Both "HERCULES" and "STANDARD" are made of best **POLISHED BLUED STEEL.**



"HERCULES." See how the pleats go around the back as well as the throat. Made in two sizes only.

Inches: 5 7



"Apollo" Kitchen

Range

Boilers

Made of "APOLLO" Open Hearth Steel.

Severely Tested at 200 lbs. before galvanizing (making tightness doubly sure), and are galvanized inside and out.

Stands for all sizes in stock.

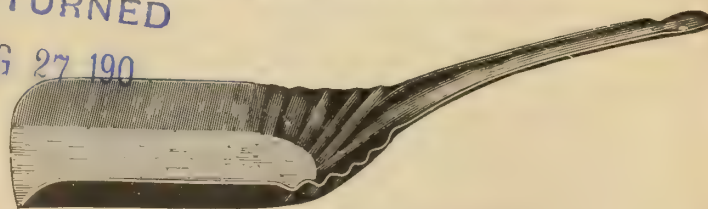


Coal Hods.

JAPANNED IN

Plain Black, Black and Gold Band, or Galvanized.

Stove Shovels.



Enamelled Ware.

OUR BRANDS,
Crescent, Colonial,
Premier, Victoria,
Star Decorated,
White, and Blue and White.

CATALOGUE AND PRICES ON APPLICATION.



The Thos. Davidson Mfg. Co., Limited, Montreal

WE MAKE

Soapstone

Stoves

SEND FOR PRICES.



FRANCESTOWN SOAPSTONE CO.

40 BRIDGE STREET,
NASHUA, N.H., U.S.A.

CHARCOAL

For Tinsmiths--Profitable.

- (1) For your own use in soldering.
- (2) To sell for heating. For summer fires, for campers' use, for a quick kindler.

For Hardware Dealers--

Profitable. To sell for heating. For summer fires, for campers' use, and for a quick kindler.

Good every month in the year, therefore is staple.

PAYS A GOOD PROFIT.

Shipped in carload lots in bulk, in less than carloads in jute sacks, of about 2½ bushels each, and **20 pounds to the bushel.**

Shipped from . . .

TORONTO, MONTREAL, LONGFORD MILLS, ONT., FENELON FALLS, ONT., and COOKSHIRE, QUE.

For Quotations and Freight Rates Address Head Office.

The Standard Chemical Co.

OF TORONTO, LIMITED.

Our charcoal is made from the best hardwood only.

Gooderham Building,
TORONTO.



THE STANDARD D.
Hard Coal, Soft Coal, or Wood. Six Holes.

The Standard D

is entirely new and up-to-date in every particular, perfect in design and finish. If you are planning for a big Fall trade you cannot afford to overlook our line. It is bound to be

A PROFIT BRINGER.

Our complete line may be seen at any time at our Montreal show rooms.

WRITE FOR CATALOGUE.
CALL AT OUR SHOWROOMS.

THE STANDARD FOUNDRY COMPANY

Manufacturers of STOVES, HOLLOW-WARE and CASTINGS of all kinds.

Head Office and Works: LONGUEUIL, P. QUE.
Phone L.D. 22.

Showrooms: 55 ST. SULPICE STREET., MONTREAL.
Phone Main 742.

Impressions Received in an Enamelledware Factory.

How Plumbing Goods are made at the Factory of the Standard Ideal Sanitary Co., Port Hope.

IN all the arts of industry and commerce the Dominion of Canada is making steady progress. An evidence of industrial development is furnished by the success which has followed the establishment of the Standard Ideal Sanitary Co. at Port Hope, Ont.

This business was started little more than a year ago to supply the Canadian trade with enameled plumbing goods "Made in Canada," which should in every point of quality compare favorably with the best imported goods.

The Canadian trade, it will be remembered, was slow to grasp the thought that the new domestic-made goods were equal in every respect to the best they were used to. Proof of their conviction on this point is furnished in the fact that to-day the demand for Standard Ideal goods is already greater than the possible production, and the doubling of the firm's capacity by the enlargement of the works is now proposed.

When the works of the company were visited a few days ago by Hardware and Metal they presented a scene of activity that won interest and attention from the first.

The processes which are included in the manufacture of an enameled bath tub or lavatory are so diverse that only an expert could hope to be successful in their production.

The raw materials are pig iron, from which the body of the bath is cast; chemicals, which are united in an enameling powder, and coal, coke, etc., for fuel crating and other purposes.

In the moulding room are hundreds of flasks and moulds, ranging in size all the way from the small pot mould in which legs, etc., are made, to the large flasks into which the molten iron is poured to form the six foot baths.

From a cupola of most up-to-date design the molten iron is taken early in the afternoon by a large staff of moulders.

Here economy of labor is a big factor. A dozen or so of large pneumatic cranes are so arranged to handle most expeditiously the heavy flasks and the large tubs. Compressed air is the motive power by which these cranes, as well as the sand sieves, are operated.

From the moulding shop the baths, etc., are removed to the cleaning and grinding room. Modern grinding tools make the latter operation a simple one, while a sand blast system for cleaning

does away with the necessity of any pickling.

The next department is the slush room, where the goods get their first coat of enamel, which is put on wet. After this operation they are left to dry and are later moved into the enamel room, which to the average visitor would probably prove the most fascinating in the works. In two muffle enamel furnaces the first coat of enamel is burned until it becomes part of the iron. By this time the entire casting is in a white heat, when it is ready to be taken out for the next coating.

Tremendously long tongs are so arranged that operators can easily take up the largest bath from the furnace and remove it to the enameling table, a remarkable mechanism which can be turned, bent or canted in any direction. While the red hot casting rests on this table an expert operator, with a pneumatic sieve, sprinkles fine white enameling powder over its entire surface. This operation is repeated three times until four coatings are burned right into, and have become part of, the tub, sink or bath.

From the furnace it is then removed to the cooling oven, where it is kept until ready for packing.

The chemical action of the heat on the enamel is interesting. When the primary coat is first put on it turns blue. After it is burned it becomes black. The second coat of fine white powder turns to a bright yellow when it touches the red-hot casting, and when it finally cools it again resumes a brilliant whiteness. The preparation of the chemical from which the enameling powder is made is a science in itself. In addition to feldspar, flourspar, leads, cryolite, quartz, sand, tin, oxide of zinc and sodas, dozens of minor chemicals are used. These are stored in kegs, barrels, and in big bins, where they look like flour in a big feed store. The mixing of these is in accordance with formulae, which are treasured as valuable secrets. After mixing the chemicals are charged into the furnace, when after three or four hours' cooking the mixture runs into cold water (kept fresh and pure) where it crystallizes. From here it is removed into steam-heated drying pans, from which after a time it is turned into porcelain lined mills, kept constantly in revolution with small porcelain balls inside. Here it is ground until it becomes a white powder of the finest texture, thus ensuring superb finish for the

ware.

In every way the plant of the Standard Ideal Sanitary Co. is excellently situated. Close to the lake and with ample room on either side there is abundance of light and ventilation. Car tracks run on both sides of the works, delivering the raw material on one side and taking the finished product at the other.

A remarkable feature of the works is the fact that they have been designed, constructed and managed entirely by Messrs. H. T. Bush and A. E. Pipher. Mr. Bush, president and manager of the company, is a manufacturer of the most recent American type. He is acquainted with every detail of plumbing and brass goods manufacture from the mechanical department to the oversight of such a company's wide-reaching interests. Under such management it is not surprising that the company's enterprise, in becoming pioneer manufacturers of this line in Canada, has borne such excellent results.

A SPORTING GOODS CATALOGUE.

FROM Lewis Bros. & Co., Montreal, Hardware and Metal has received a copy of their new catalogue, No. 33 which is devoted to arms, ammunition and sporting goods. There are one or two features of this catalogue deserving of special notice. In firearms the leading makes are illustrated and with each gun or rifle is also shown the cartridges which should go with it. It has always been the custom of this firm in planning their catalogues to assume that pictures are more readily comprehended than words. Following this plan, the merchant using this new catalogue will be able to tell at a glance what ammunition to order for a particular rifle.

Cartridges are classified according to an ingenious and comprehensive plan and it is easy to get the exact information desired at a glance. Rim fire cartridges are described first and a handy table gives particulars as to the rifles to which they are adapted, number in a case, weight of bullet, etc. The same information is given regarding central fire cartridges and in addition the number of the primer used is stated. Pictures are again employed, every cartridge being illustrated.

In addition to arms and ammunition, various lines of sporting goods such as skates and hockey sticks are included in the catalogue. Credit is due J. N. Hunter, the compiler of this catalogue, who has proved a worthy successor to Theodore Korb, with whose work on this firm's 1,000-page catalogue most of the readers of this paper are familiar. Any reader of Hardware and Metal will be mailed a copy on request.

THE STANDARD IDEAL SANITARY CO.

LIMITED

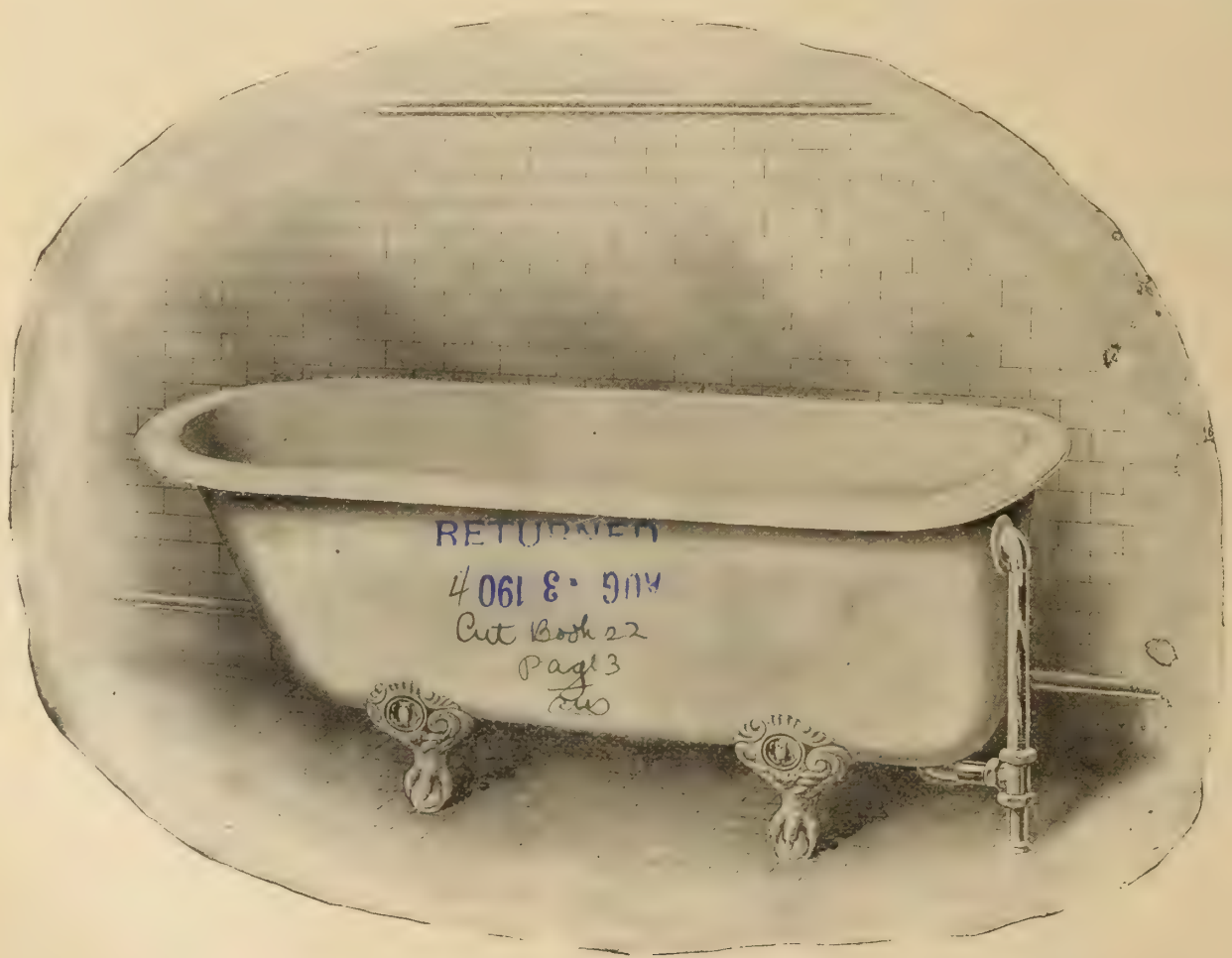
THE ONLY MANUFACTURERS IN CANADA OF

White Porcelain Enameled Bath Tubs,

White Porcelain Enameled Lavatories,

White Porcelain Enameled Sinks,

White Porcelain Enameled Slop Hoppers



"MADE IN CANADA."

MAIN OFFICE AND FACTORIES,
Port Hope, Ontario.

SALES OFFICE,
50 Colborne St., Toronto.

National Master Plumbers' Association of Canada.

Report of the Ninth Annual Convention of the National Association of Master Plumbers, Steam and Gas Fitters of Canada, held at Toronto.

WITH an enthusiasm never surpassed in any of the eight successful conventions held by the National Master Plumbers' Association, the ninth annual convention of the body was opened by President Joseph Thibeault, of Montreal. The first day's proceedings, right up to the singing of Auld Lang Syne at the close of the banquet, were carried out in the same spirit.

When at ten o'clock Wednesday morning President Thibeault opened the first session of the convention, there were present many of the stalwarts who have from the inception of the associational idea given of their time and energy, of their executive ability and their moral courage to a movement which already



Past President Thibeault.

has attained a force that a few years ago was deemed impossible.

At the president's right one would have noticed William Mansell and W. H. Meredith, who, through their work in the Toronto association and their influence in every associational movement, have done much to strengthen and organize the craft. Nearby, too, was the active veteran from London, William Smith, whose vigor and wise counsel meant so much to the body in its earlier years. At the secretary's desk was H. A. Knox, of Ottawa, who has imported life and activity into the movement in recent years, while his fellow townsman, John McKinlay, one of the steady-thinking members, was to one side. On the left Wm. Watson, of Moncton, and George Kinsman, of Halifax, the official representatives from Nova Scotia, were accompanied by James Farquharson and James G. Crump. Harry Mahoney, of

Guelph, the jovial Irishman, and W. G. Butler, of Perth, the quiet but well-posted, were in their usual places.

Two new delegates, A. J. Hammond and Charles Plaxton, of Winnipeg, were given a royal welcome, especially as they bore tidings of a movement toward better organization in Winnipeg, and possibly in other points in the west.

The Montreal delegation which accompanied President Thibeault was made up of high-grade men. In W. R. J. Hughes the association found a new delegate, a worthy son of one of the most respected members of the craft in the Dominion, J. W. Hughes. A namesake and distant relative of the Premier, in the person of Joseph Laurier, together with Thomas Moll, J. A. Gordon and Frank Bonhomme, made a strong team from the metropolis of the Dominion.

The Toronto delegation, under the leadership of Vice-President Geo. Cooper and Fred Armstrong, was representative of the entire plumbing trade in that city.

THE PRESIDENT'S WELCOME.

Under such conditions it was natural, therefore, that President Thibeault, in his opening remarks, should express keen satisfaction at the interest shown in the associational work, as evidenced by the large attendance of representative plumbers. The president also expressed appreciation of the preparations for the comfort and convenience of delegates, and for the work of the convention. He felt that the trade had awakened to the fact that the association was formed not merely to cause better relations between the different branches of the trade, but also for the distinct betterment of the conditions under which every plumber worked. It had already been proven that organization was the sound, safe method of attaining their desires, and he hoped that the sessions of the present convention would result in further progress along the lines they were following. He hoped every man present would derive pleasure and profit from his stay in Toronto.

John McKinlay, of Ottawa; Joseph Laurier, of Montreal, and Robert Harrison, of Toronto, were chosen as the credential committee, to report Thursday morning.

At the request of the chair, Secretary Meredith announced the programme for Thursday and Friday. He particularly

asked a large attendance at the business sessions.

THE CIVIC WELCOME.

By this time the representatives of the Municipality of Toronto, Acting-Mayor Chisholm and Ald. Ramsden, had arrived to officially welcome the delegation to the city. They were introduced by that prince of jolliers, Fred Armstrong, who explained to the president how anxious they were to give the delegates a warm welcome.

With that grace only possible to a French-Canadian, President Thibeault



President Robert Ross.

"gave the glad hand" to the delegation. In return Acting-Mayor Chisholm offered "the keys of the city" to the visitors. He welcomed them to the prettiest, cleanest and most attractive city in North America, and trusted to see the convention assembled in Toronto another year.

As some members of the executive had not arrived in time for the meeting early that morning, there was no further business, so the president called on speeches from many of the supply houses.

THE SUPPLY MEN'S WELCOME.

Peter McMichael, of the Dominion Radiator Co., as chairman of the sup-

ply men's reception committee, added a cordial welcome to all the delegates and visitors. The supply houses had decided to do everything in their power to give the delegates a royal time. He hoped their actions in the matter would speak louder than any words he could utter would.

J. H. Paterson, of the Toronto Hardware Co.; H. W. Anthes, of the Toronto Foundry Co.; A. A. McMichael, of the James Robertson Co.; W. S. Jackson, of the Ideal Mfg. Co.; E. J. Brewer, of the Gurney Foundry Co.; W. N. Forbes, of Wm. Stairs, Son & Co., Halifax, added their welcome in brief speeches.

also in the Royal City, and we now welcome you back to our fair city.

"While it is not our desire to encroach upon the business session of the convention, we earnestly extend to one and all a hearty invitation to enter into the social functions of the occasion, and I express the hope that all may carry away with them pleasant memories of their visit to the city.

"We are glad to meet—will be sorry to part—but we part with the hope of meeting again.

"In closing, allow me to say that I sincerely hope that the business benefits resulting to our craft from the

plumbers or supply men, attracted general attention. Nothing serious happened en route, except the stop at Rosedale Hotel, and that was not long enough to be serious.

After the drive the delegates, visitors and local plumbers gathered on the City Hall steps, where, after several plates had been spoiled, an excellent group photo was taken. This will be published in a day or two.

THE BANQUET.

For many years the complimentary banquet tendered by master plumbers and supply houses of Toronto will be



Delegates and visitors of the National Master Plumbers' Association.—City Hall steps, Toronto.

TORONTO ASSOCIATION'S WELCOME.

The grand finale in the series of welcomes was that from the Toronto association, hosts of the convention, read by Vice-President Geo. Cooper, as below: "In the absence of President Ross the privilege of welcoming this important body of men to our Queen City has devolved upon me. It has been with considerable pride and satisfaction we have watched the solid and rapid growth of our course since you last have met in the City by the Sea,

annual gatherings may increase as the years come and go."

After adjournment the executive met in informal session, and other members of the association spent the rest of the morning in talking over former conventions and problems of the day.

DRIVE AROUND THE CITY.

In the afternoon about seventy or eighty visiting and local plumbers were given a drive around the city by the civic authorities. The procession of carriages, each with four handsome

remembered by those present. In the first place it was by far the largest yet in point of attendance. Among the delegates present from outside were:

Montreal—President Joseph Thibault, Joseph Laurier, J. E. Parker, Thomas Moll, Frank Bonhomme, J. E. Parker, and W. R. J. Hughes.

Guelph—Harry Mahoney.

Perth—W. G. Butler.

Barrie—J. H. Neelands.

Halifax—Geo. Kinsman, James Farquharson and James G. Crump.

July 23, 1904

HARDWARE AND METAL

Canada's Leading House

FOR

PLUMBING SUPPLIES



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Our Travelling Representatives for the Province of Ontario ·

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J. B. ALLEN, W. F. COLSTON.

OUR PRICES WILL INTEREST YOU.

WRITE FOR SPECIAL QUOTATIONS.

ONTARIO LEAD AND WIRE CO., Limited

FRED. SOMERVILLE,
General Manager.

— Toronto, Ontario.

Winnipeg—Chas. Plaxton and A. J. Hammond.

Ottawa—Secretary H. A. Knox, Treasurer F. G. Johnson and John McKinlay.

London—Wm. Smith, C. F. Needham and E. H. Russell.



Edward Gurney, the Orator.

surpass, as may be judged from the accompanying reproduction of the first page.

When the cigars were being passed around Chairman Armstrong arose. He was constrained to utter the deep, sincere desire in his heart that those who were honoring the hosts should receive profit as well as pleasure from the convention to be held; that in the future the receipts of everyone of his co-workers in the business he was so proud to follow would be increased. The plumbers, from the Atlantic Coast to the limits of good plumbing in the west, were a body of men who for brain or brawn would compare with any class in the country. He recognized that each delegate from a distance was making a sacrifice in leaving his business at this season to attend the convention, but he felt it possible that as a result of this sacrifice the trade throughout the Dominion would be uplifted, that the trade would be safeguarded in such a way as to result in the general welfare. (Hear, hear.) The Toronto association was not yet ideal, but everyone in connection with it was proud of it (applause) for the simple reason, if for no other, that every reputable plumber in the city was a member of it.

The Master Plumbers' Association was a mutual benefit association. It had in mind the benefit of every member, fairness to the public and thorough loyalty to those supply men and manufacturers

facturers made the goods, the plumber was the legitimate distributor and installer. To leave that work to the public would result in bad work and, as a result, more bad health. In Toronto this recognition had been attained, with the result that to-day the class of plumbing done in Toronto was of a much higher standard than in former years.

The association had found opposition, the first of which came from the builders who were looking for cheap jobs for houses built for speculation. When the trade were educated to keep prices on a higher scale these builders were annoyed. They saw that the Toronto plumber should henceforth have a fair share of the profits on work done, the bulk of which profits had been pocketed by the builder in the old days. Opposition had come from some of the architects, partly due to bad faith on the part of a very small proportion of the association members, men who had lied to the architects and thus caused trouble.

He had the authority to propose through the representative plumbers present that the Ontario Architects' Association appoint a committee who would be welcomed at the plumbers' headquarters and would be shown the by-laws, methods, etc., of their association. He desired the friendliest relations between the architects and the master plumbers. (Hear, hear.)

The supply houses were represented as follows:

The Gurney Foundry Co., Toronto—Edward Gurney, Cromwell Gurney, T. B. Alcock, E. J. Brewer, W. L. Helliwell and Holt Gurney.

The James Morrison Brass Mfg. Co., Toronto—Chas. E. and Robt. A. Morrison, F. Hadley, F. W. Armstrong and C. M. B. World.

The James Robertson Mfg. Co., Toronto—A. A. McMichael, H. S. Harwood, Geo. McQuillan, W. A. Sheppard, J. R. Foster, J. M. Owston, D. J. Proctor and H. Mole.

Standard Ideal Sanitary Co.—A. D. MacArthur, W. S. Linton and R. Shirreff.

Toronto Foundry Co., Toronto—H. W. and L. L. Anthes.

The Ontario Lead & Wire Co., Toronto—Fred and Arthur Somerville, W. A. Porter, J. F. Dewar and A. C. Ormston.

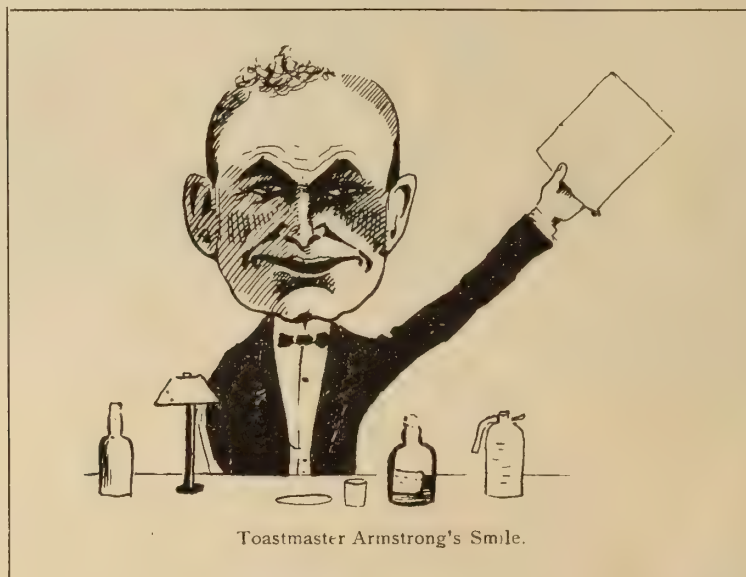
Toronto Hardware Co.—J. H. Patereson and Geo. H. Gouinlock.

The Borden Co., Warren, O.—R. M. Storer.

Wm. Stairs, Son & Co., Halifax—W. N. Forbes.

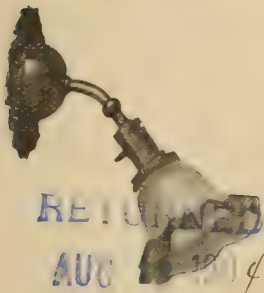
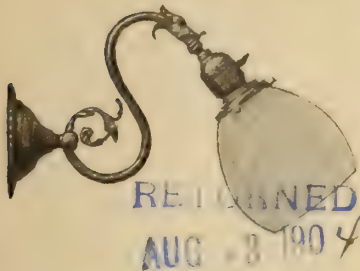
The Star Iron Co., Montreal—T. J. Carling.

And, as is usual when a skilful toastmaster is at the head of the board, numbers engendered enthusiasm. For originality and excellence of topical hits the menu card would be hard to



who were fair to its members. The association had been criticized for having an agreement with the supply houses, yet such an agreement was essentially fair and wise. All the masters asked of the supply houses was that they recognize the plumbers as the legitimate channel through which the public should secure plumbing goods. The manufac-

The plumbers should take such an interest in their work that their example would be a good influence radiating to every town and village in the Dominion. (Applause.) The association preached the gospel of sanitary safety along scientific lines, done by regularly organized sanitary experts. This would at once safeguard the public against dan-

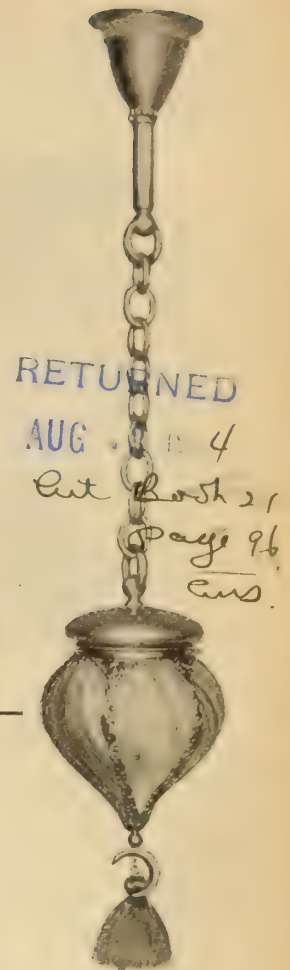


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Gas and Electric Fixtures

We make these goods suitable for all kinds of buildings—
Public Buildings, Churches, Private Residences, etc.
Designs submitted for special contract work.

—New Price on Gas Arc Lamp—



PLUMBING AND

Heating Goods



Our Low Down "ELGIN"
Wash-out.

See the Nethery Patent Flush Valve

in operation in our showrooms—the latest and
simplest. Just think, only three parts in its construction.
Can't get out of order. Works under high or low pressure.



They Stand the Test.

The
James Morrison  **Brass Mfg. Co.**
Limited

89-97 West Adelaide Street., TORONTO

gerous plumbing, and will prevent the plumber from demeaning himself to accept less than what he knows to be right and fair.



A Namesake of Premier Laurier.

The applause which greeted this peroration at last quieted down to a murmur of favorable comment, when in a burst of enthusiasm Toastmaster Armstrong proposed "His Most Gracious Majesty the King," which was greeted with musical honors.

The toast, "City of Toronto," was proposed by J. J. McKittrick, and responded to by Acting-Mayor Chisholm, who again expressed pleasure of welcoming the delegates.

"Our Guests, the National Association," was next proposed by Peter McMichael, who in about the shortest speech of the evening declared "the householder is in the hands of the plumber (Oh! Oh! Oh!) as far as health is concerned." (Laughter.)

President Thibeault responded to the toast. He was a plumber by accident. He had been born on a farm too small to sustain all the family he was a part of, so he started to Montreal to seek work. As luck would have it, the first success he had was when he met a big Irishman who had just been started out with his tool bag as his stock-in-trade. He found the business an honest, decent one, so he stayed at it until he was finally a master plumber. He had in that time become devoted to Montreal, yet he was willing to admit that Toronto was superior to any place he had ever seen in his travels (applause.) He was in Toronto to learn something about his business. He felt confident that he would do so, and would thus be able to go back to his work better equipped than before for the problems likely to arise. Once again he desired to express his appreciation of the big-hearted way in which the Toronto people were treating their visitors. They in Montreal

would do their best to reciprocate. He also desired to thank the trade press for the extra attention devoted to this convention.

Secretary H. A. Knox followed with an incisive speech. He wished he could utter as he desired his appreciation of the warm welcome accorded them. The master plumber, he went on to state, was helping others when he insisted on good work and fair prices. Their work was done, too, on national lines. Neither race nor creed nor color nor sectional influence ever affected their decisions. In former days the plumbers' trade had not been adequately respected for the reason that so many of the trade were uneducated and there was no organization. By intelligent, united action they could make their work one of the most highly respected in the land.

MENU

Cream of Celery

"Ha! Ha! I have a bright idea."—Carrick.

Planked Niagara Whitefish

(Pomme Duchesse)

"Am I majestic? Well! Have a look."—Somerville.

Sweetbreads en Casserole

"Safford joints are perfect daisies."—P. McMichael.

Lamb Chops a la Luculus

Peas a l'Anglaise

"Acme! Acme! Where have I heard that word before?"—A. McMichael.

Roast Spring Chicken au Jus

Salad Tomato

"Lofty ideals! Nit! Standard for me."—MacArthur.

Nesseroide Ice Cream Assorted Cakes

"I did not make the earth, but I made Dominions."—Patterson.

Angel Surprise

Fruits of the Season

"Brass is as good as gold when J. M. T. is stamped on it."—Morrison.

Black Coffee

Cigars

"A good pipe? Sure, Mike."—Anthes.

Chas. Plaxton, of Winnipeg, brought greetings from the western city, where building operations are being conducted on a stupendous scale. They were looking forward to the completion of an organization in Winnipeg, and hoped to have more to say at next banquet.

In proposing the toast, "The Architects," P. Hayes pointed out that in their skilful, artistic designing of the public and private buildings of Toronto, the architects had contributed in a material degree toward making Toronto such an ideal, beautiful city, as had been remarked by so many of the visiting delegates.

John Gemmell, president, and—Gregg, secretary, of the Ontario Society of Architects, responded.

For some time W. H. Meredith has been known as the "Silver tongued orator" among the plumbing craft. By general consent after his speech in proposing the toast to "The Trade, Master Plumbers, Steam Fitters and Supply Houses," Toastmaster Armstrong dubbed him the "Golden tongued orator."

Mr. Meredith had just returned from a trip to Winnipeg with Wm. Mansell, and so was glowing with enthusiasm regarding the future of the Great West. Winnipeg, he had been informed, was destined to out-distance Toronto entirely. The country is in the growing stage. Today it is young and any forward steps made now are likely to be of lasting benefit. So it should be the aim of every plumber to safeguard his business with organization and solid, well-reasoned principles. He remembered the time when the trade in Toronto had a profit of 35 to 40 per cent. This percentage was steadily reduced until it was practically wiped out and the trade had to call a halt. Now it is time to get back to a legitimate margin and stay there. Pointing to the badge at his breast he exclaimed the colors were emblematic. The black was typical of the dark hours that had been passed. The red was prophetic of bright days ahead, the white typified the purity of the business methods and the gold the gold that should crown the plumber here or hereafter.

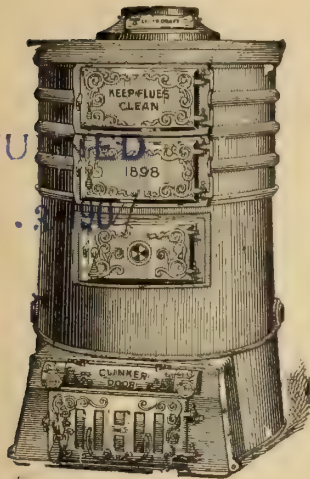


When Harry Mahoney Sings.

Edward Gurney, in rising to respond, was held with the question, "Where are the old men?" The vast bulk of the men before him were young men, seemingly full of snap and vigor. Where

"SIRDAR" BOILERS

HOT WATER



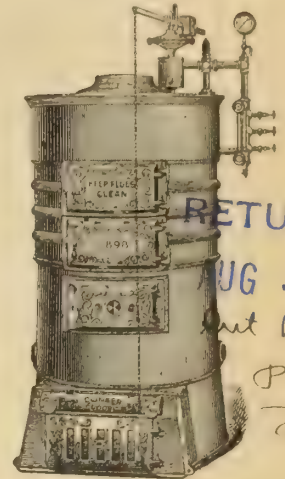
The attention of Architects and Heating Engineers is called to the merits of our "Sirdar" Boilers, illustrated herewith.

They possess distinctive features not found in other boilers. These, combined, give a maximum of efficiency for a minimum expenditure of fuel and labor.

They are handsome in appearance, easy to instal, and wonderfully quick heaters.

Write for catalogue giving full description, and copy of testimonials.

STEAM



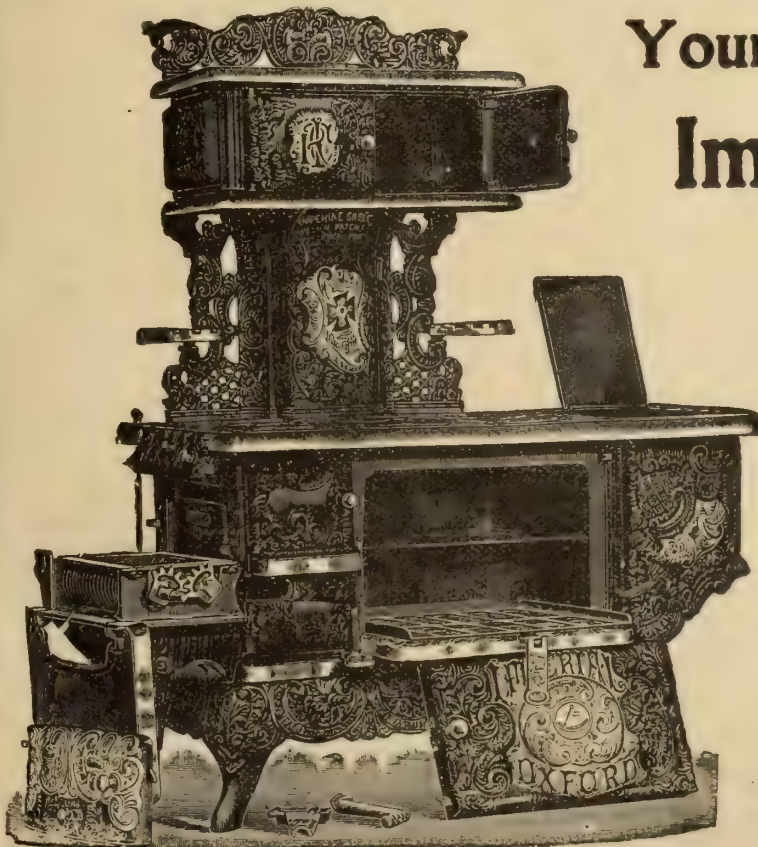
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Plumbers, Steam Fitters, Engineers
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Your customers know the Imperial Oxford

When you mention that you can supply an Imperial Oxford Range, there is no more argument needed. That is where you make your profit. The Imperial Oxford sells without a lot of haggling and promising, and after it is sold you hear nothing of it but good.

The Gurney Foundry Co., Limited,
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:
THE GURNEY-MASSEY CO., LIMITED,
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., LIMITED
CALGARY, ALTA.

were the old men? Were they crowded out of business, or were they taking life easy, leaving the forward work to the young men. It had been his experience that the same condition existed in all kinds of associational work in both Canada and the United States. For 40 years he had been engaged in associational work. He believed in associations, thought them a great power for good. Yet their usefulness could be easily lost by injudicious acts. The association that was guided by the great principle of fair play, that never tried to tyrannize over any class or man, could be a great force for good. For a time it might even succeed in tyranny, but the end was inevitable for there is something inherent in the British blood that makes every Briton insist on his rights, maintain and fight for them. So long as the Master Plumbers' Association never tried to tyrannize he could promise them power and influence, increasing success. He was glad to note, too, the development of national sentiment. The two parties in the United States had practically declared against reciprocity with Canada. So Canada should in its tariff and in the personal view-point of every citizen say "Canada for the Canadians" and act up to that in all our business relations. (Hear, hear, and cheering).

Wm. Mansell was gratified when he looked back over the years of work that had been done to foster the associational spirit. At first it was difficult to get even the master plumbers to get together. Now the manufacturers, supply men and master plumbers, having learned the advantage of co-operation, were coming steadily closer together. He felt confident of the future success of the movement.

Alex. Saunders, of Goderich, was glad that the plumbers were looking after their business in a modern spirit. The Canadian manufacturers were setting the pace for the world in at least one line of plumbing goods, as evidenced by the export trade in plumbers' earthenware.

The toast to "The Ladies," proposed by the chairman, was responded to by Geo. Clapperton, Harry Mahoney and Geo. Cooper, all of whom manifested a proper spirit of devotion and gallantry in their remarks.

"Auld Lang Syne" concluded a splendid evening.

Thursday Morning.

When the chair was taken Thursday morning by President Thibeault the

attendance was largely augmented by the arrival of more delegates. All those who had attended the banquet demonstrated themselves experts by the freshness of their appearance and vigor of their work.

At the request of the president, the Credential Committee presented its report through Mr. Mahoney, and the following were named as accredited delegates to the convention:

THE OFFICERS.

President—Joseph Thibeault, Montreal.
Vice-Pres. (pro tem)—W. H. Meredith, Toronto.



Heavyweight John McKinlay.

Treasurer—F. G. Johnson, Ottawa.
Secretary—H. A. Knox, Ottawa.

PROVINCIAL VICE-PRESIDENTS.

Ontario—H. Mahoney, Guelph.
Quebec—J. Laurier, Montreal.
Nova Scotia—Geo. Kinsman, pro tem, Halifax.
New Brunswick—W. Watson, Moncton, N.B.
British Columbia—J. McKinlay, Ottawa.
Manitoba—A. J. Hammond, Winnipeg.

ONTARIO PROVINCIAL ASSOCIATION.

President, Wm. Mansell, Toronto.
Galt.—Hy. Dakin, B. F. Bennett.
Stratford.—A. E. Sylvester, H. Peters and J. Myers.

Hamilton.—W. J. Clark, J. H. Stewart and And. Rogers.

Barrie.—J. H. Neelands and G. H. Ling.

Ingersoll.—S. King.

St. Catharines.—S. Gourlay and A. Riddell.

LOCAL ASSOCIATIONS.

Winnipeg.—C. Plaxton and A. J. Hammond.

Montreal.—John Watson, Thos. Mall, J. A. Gordon, W. R. J. Hughes, F. Bonhomme, Joseph Thibeault and Joseph Laurier.

Perth.—W. G. Butler.

Halifax, N. S.—Geo. Kinsman, James Farquhar and James J. Crump.

Guelph.—H. Mahoney and W. Stephenson.

Ottawa.—J. G. Johnson, H. A. Knox and John McKinlay.

Toronto.—Geo. Clapperton, G. H. Cooper, R. W. Harrison, K. J. Allison and H. Bevis.

London.—E. H. Russell, W. Smith and C. F. Needham.

A welcome addition to the day's deliberations was a delegation from the Buffalo Master Plumbers' Association: Daniel Lund, president of that body, Walter H. Cains, James S. Stygall and Wm. E. Jackson. These gentlemen were present on an invitation extended some time before by W. H. Meredith.

PRESIDENT'S ADDRESS.

To the National Association of Master Plumbers, Steam, Gas and Hot Water Fitters of Canada, at the opening of this, our Ninth Annual Convention:

It was my good fortune to be chosen as president of the National Association of Canada, which I consider a great honor, both to myself and to my confreres of the Province of Quebec. And I am pleased that the delegates to the convention in Montreal of 1903 chose for this convention the City of Toronto, which, on account of its natural beauties, is an ideal city in which to hold a meeting of this kind.

I trust that the sojourn of the delegates in this the Queen City will be most agreeable and profitable for all, knowing that the city fathers and citizens cannot be excelled in the way in which they receive and entertain us as visitors. There is no doubt that everyone who has had the pleasure of being received as a guest by the City of Toronto will long remember the reception and attention shown to them.

Gentlemen, I would ask you now to give your attention to the business of this convention, and do not let the pleasures—of which there are many—interfere with the attendance at the meetings, which are of the first importance.

During my term of office I have been in close touch with the master plumbers of the Dominion, and I now take the opportunity to thank the officers who have so well and ably supported me, making my duties almost a sinecure.

The convention of 1903, held in Montreal, has been of great benefit to the

Light Upon Light

The best of lights had a setback last autumn by accidents, with wrongly constructed generators, and are satisfactorily explainable. These accidents were few, compared with those caused by electricity, coal gas, kerosene, gasoline, but, being new things, were magnified by newspaper paragraphs.

Our Star Water Pressure Generator has been approved by the Canadian Underwriters Association, and in successful operation since 1902 among hundreds of patrons, whose testimonials prove it satisfactory and safe, and we have greatly improved it this year. Let us tell you about it. It differs in principle from all others. Has no exposed water seal. It vents to outer air only. It does not "blow off" and waste gas merely to regulate the pressure at the tips, as it has a governor for that purpose, but it is provided with effective safety vent so that no gas or odor can escape indoors any more than city gas can.

Our patents cover the whole Dominion. We can sell and install anywhere in Canada and insure satisfaction. We also control the United States Patents.

Correspondence is invited from buyers direct and from applicants for agencies. We can sell county, and larger, exclusive rights in Canada and United States.

We have a perfected plan for club, syndicate, village and town plants, far cheaper than coal gas works or electric plants and more efficient.

We will take some stock in companies in villages and towns having fair prospects of growth to operate acetylene gas plants for dividends.

Cut out this advertisement, paste it up where it will be seen and remembered. Write us early and often until you understand the matter fully.

St. Thomas Acetylene Mfg. Co. Limited.

CAPITAL, \$100,000. ISSUED CAPITAL, \$40 000.
ST. THOMAS, ONT.

Fire! Fire! Fire!

We have had the misfortune to lose our buildings and plant by fire, but succeeded in saving our Metal Clad Warehouse filled with good stock. We have also secured temporary premises and are again manufacturing standard lines, and are figuring on taking care of all orders without any further interruption.

Our loss is a serious one, and you can show practical sympathy by sending us your orders.

We will take good care of you.

THE METAL SHINGLE AND SIDING CO., LIMITED,
PRESTON, ONTARIO.

Montreal association in particular, which I am pleased to inform you is now stronger and has much more esprit de corps than formerly.

In the past year I visited many of the master plumbers of Montreal, Quebec, Ottawa, and other cities, and found business good, and would suggest that the new officers make a special effort to help the organization in the City of Quebec, which has of late somewhat deteriorated. In the matter of provincial associations, Ontario is still in the lead, but there are indications of a better organization in the Province of Quebec, especially in the City of Montreal.

The reports of the officers of the national association will cover the business features of the past year, and I trust that you will give your earnest attention to their recommendations, which must be acted upon with justice to all concerned.

In support of our past president Mr. Powers' suggestion, I would again draw the attention of this meeting to the great necessity of a permanent official to act as secretary and visit the different local associations, to assist them in improving their organization. I trust that the reports of the several committees which will be submitted to you will be given your careful consideration, as there is room for improvement in many of the branches of sanitary by-laws.

I also beg to report that the good feeling between the supply houses, manufacturers and master plumbers still continues, and I would like to thank them for the able and generous manner in which they have settled any complaints brought to their notice.

In the name of the national association I wish to thank the press, particularly the trade journals, for the help they have given the association. As president of the association I wish to thank the members one and all for their earnestness and kindness in helping me in my duties of the past year, and especially our secretary, H. A. Knox.

Yours truly,

J. THIBEAULT.

THE SECRETARY'S ADDRESS.

To the President, etc.:

To review the work of the past year is the reason you are in session. My duties as secretary have been cheerfully performed. Official life is an undercurrent. Its work is none the less effective nor the less arduous because the machine of legislation works easily, its only directors being honesty, application and wisdom. Much correspondence throughout the year exercised the consideration of your executive. All matters of contention were dealt with in a way to ensure the stability of the association, by extending its influence to places formerly unorganized and by increasing the interest of all master plumbers generally.

Various letters have been referred to you by the executive for your consideration, several bearing the signature of the president of the United States National M. P. A., and others from supply houses in the Dominion. The details of the year's work are faithfully recorded in the minutes, this and other features of the management being due to the as-

sistance rendered me by my fellow officers.

Respectfully submitted,

H. A. KNOX,

Secretary N. A. M. P.

Ottawa, July 19, 1904.

VICE-PRESIDENT'S ADDRESS.

To the President, etc.:

Gentlemen,—In presenting my report to you allow me at the outset to express my sincere regrets at being unable to personally greet you when in session in the Queen City of the West. You can rest assured, gentlemen, that while I may be absent from you in the body my thoughts will be of you, and I trust that your stay in our city will be so pleasant, and the profit from a business standpoint so great, that the convention of 1904 will remain in your memory as the best convention held by our national association.

While my position as national vice-president extends over the entire jurisdiction of the association, my field of observation has more to do with my own province, Ontario. I have looked with a great deal of pride and pleasure at the growth and popularity of our cause in this province. I believe, gentlemen, that the national association made a master move when they drafted into their constitution the right of each province to organize provincial associa-

Winnipeg has been chosen for the convention of 1905, to be held at the time of the Winnipeg Exhibition.

tions. When we look at the good that has accrued to the craft in Ontario since the inception of a provincial association, especially this past year, we cannot but admit that the fullest benefits are only derivable through such agencies.

I trust that the sister provinces will rapidly fall into line and organize. Montreal is organized; why not the Province of Quebec? Halifax and Sydney are organized; why not Nova Scotia? Winnipeg is organized; why not Manitoba? The far west is partially organized; why not fully?

Now that our associations have commenced to build on business lines, and are putting into practical operation more honorable and equitable principles in tendering and carrying out works entrusted to us, and our main aim being to see how perfect we can perform our work,—not alone from a sanitary standpoint, but also from a workmanship point of view, consideration being given to the smallest detail, and knowing as we do that a business run on these lines will command the highest endorsement of all right thinking people,—there should be no hesitation on the part of any of our members to stand by our principles. I trust that thoughtful consideration be given to the notice of motion of the Toronto association as to making the meetings of the national association triennial instead of as now, annual. We must all admit that more good can be accomplished by concentrating our effort along the lines of provincial organization.

In closing, allow me again to offer my regrets in being unable to be with you and to express the hope that your sessions may be of very great interest to all; also that the year in which we are about to enter may be one of prosperity to all.

I shall in future do—as I have tried to do in the past—all I can to aid the association in its laudable aims and objects in bettering the trade conditions of our craftsmen.

Respectfully submitted,

R. ROSS,

National Vice-President.

APPRENTICESHIP COMMITTEE.

To the President, etc.

Gentlemen,—The Apprenticeship Committee beg to submit the following report: In the first place we might state that the apprenticeship question has in the past been lost sight of. We do not think the master plumbers at their annual meetings have given this grave question the prominence it is entitled to.

If the master plumbers are responsible for the advancement of the apprentice, then it is time for them to take some action in the matter, but if the journeymen are responsible, the sooner we acquaint them of the fact the better for both parties.

As it stands to-day, the majority of boys spend three or four years waiting on the journeyman plumber and then begin to realize that they know nothing about the trade. They then leave to try some other calling, thereby losing three or four of the most valuable years of their life.

Speaking from experience, not one boy in ten learns the plumbing business, and we think it's the master plumber who should find the reason why, as he seems to be directly responsible to the parents for the advancement of the boys whom he takes to learn the plumbing business, but unfortunately the system is bad, as each and every journeyman demands a helper, and as the boy becomes the servant of the journeymen plumbers, the question arises, is it profitable for him to learn the boy the trade? Taking into consideration the small percentage of boys turning out plumbers, we think the system is bad, as the boy of to-day should be the master plumber in a few years to come, and as the plumbing business ranks among the first in the land nothing should be left undone to advance the boy's interests.

Therefore it is the wish of your committee that the boy question should be fairly dealt with at our annual meeting, and if we succeed in advancing the interest of the poor plumber's helper, we think it will be a mutual benefit to the master plumber, journeyman plumber and the future apprentice.

Respectfully submitted.

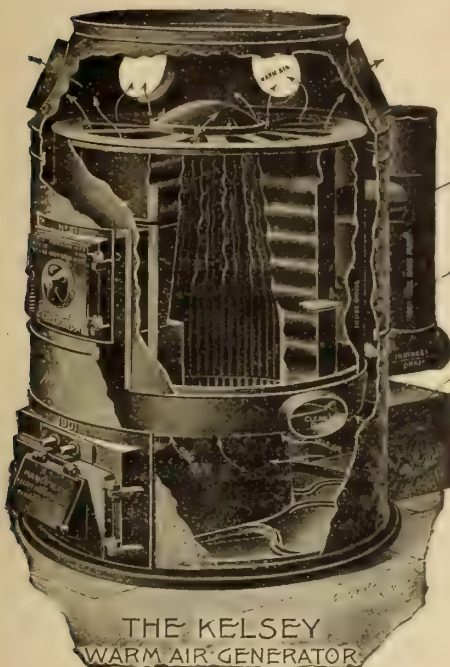
GEORGE A. PERRIER,
Chairman Apprenticeship Committee.

LEGISLATIVE COMMITTEE.

To the President, etc.,

Since the formation of the Ontario Provincial Association, the necessity of introducing legislation of a local or do-

HIGH-CLASS HEATING



MADE IN 5 SIZES

Heating capacities: 5,000 to 100,000 cub. ft.

Note how fire-pot and combustion chamber are formed.
No solid, round, caldron fire-pot to warp, crack and burn out.

RETURNED Kelsey Record

JUL 27 1904

*R. Cutbush
Tag 4473
Aon*

only made and sold in 1889

More than **24,000** pleased users in 1903.

In use in some **400** different Canadian places.

Being used for the **Proper and Economical** warming and ventilating of upwards of **50** Canadian schools.

Sales for first six months of 1904 more than **double** those for same period of 1903.

Over **2,300** in use in its Home City (Syracuse, N.Y.)

This remarkable and satisfactory showing must be due entirely to Merit, as the "**Kelsey**" is not in the "Just as Cheap" class.

The **Kelsey** is a specialty. **Kelsey** dealers have something to talk besides price.

Kelsey Booklets will tell you all about them.

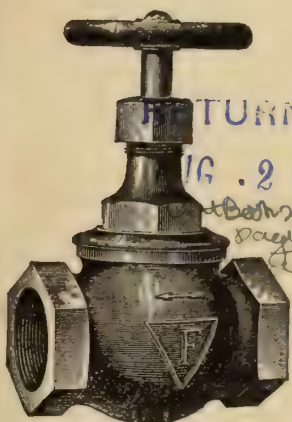
The James Smart Mfg. Co., Limited

Winnipeg, Man.

Brockville, Ont.

Exclusive Canadian Makers.

SOME PLUMBERS ARE BLIND



to their own interests when it comes to a question of Valves, Fittings and Steam Goods of every description.

They never pause or endeavor to discriminate between poor quality and the best quality.

The reason we keep "drumming" you constantly regarding Fairbanks Valves, Steam Goods and Specialties is because we really know the quality of our goods to be the very best. This is the open secret of our success and growth in business in Canada.

No one has ever built up an honest lasting trade on poor quality of goods. See the point?

MORAL :

BUY FAIRBANKS VALVES.

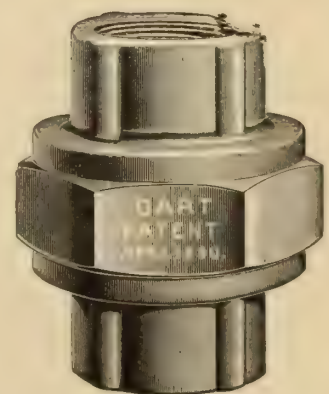
THE FAIRBANKS CO.

MONTREAL

TORONTO

VANCOUVER

WINNIPEG



mestic character is everywhere apparent. Each municipality must work to assist its own salvation, local differences are responsible for particular legislation. The first step of each local should be to acquaint its neighbor of the remedial measures adopted.

The trade will then be so vitalized that its advantages will be of a material as well as honorary character.

E. B. BUTTERWORTH, Ch.

SANITARY COMMITTEE.

To the President, etc.,

Gentlemen—It was not to be expected that anything new or startling would happen since our last annual meeting, but it is a source of great satisfaction to your committee to be able to report that the good work goes on apace. The stage of agitation and excitement being passed, matters sanitary are now taken up and considered and acted upon as a matter of course and regular routine that a few years ago would have been considered radical and revolutionary. Attention is being given to the food and water supply of our people as a matter of course and part of the duty of those responsible for things sanitary good and sufficient. Good and sufficient drainage and plumbing is considered to be an essential part of every dwelling, and people not aware of the facts think that it was always so, but those in our business well remember the time when the public had the opinion that anything nasty was good enough provided it was cheap.

There is one question that requires the attention of our association, and that is overcrowding. As our cities develop there is an increasing tendency on the part of house builders to crowd the people into small space, and deprive them of the health-giving blessings of light and air. We have agitated for years in favor of improved conditions as regards plumbing and drainage, and have achieved a reasonable amount of success. We must now take up the question of overcrowding and do all in our power to impress on the powers that be the necessity of preventing constructors of buildings from depriving the occupants of a sufficient amount of light and air. The dwellers in our large cities have this problem already before them for solution, and to those whose lot is placed in the less populous communities, the duty presents itself of preventing the development of these unsanitary conditions, so fatal to health and happiness. Your committee urge upon our members to note the requirements in this matter and agitate for improvements. A general public health law, covering the Dominion is required, and the legislator who succeeds in having it placed upon our statute books will deserve the gratitude of his fellow countrymen. The whole respectfully,

J. W. HUGHES,
Chairman.

The reports of the various provincial vice-presidents were next given as below:

ONTARIO.

To the President, etc.,

Gentlemen—As provincial vice-president for Ontario, I beg leave to submit the following report: When I had the honor of being elected to this office, I felt that it was a more responsible position than I was able to fill, but the way the president and officers do their part makes this office one of honor and very little work.

The Provincial Association of Ontario paid to the Dominion Association last year, \$217.25, the other provinces combined only paid \$225, very plain evidence that if we wish to make this association one of great strength we must get the provinces organized into provincial associations.

All the master plumbers in Ontario state that there is plenty of work and fair prices, while some few years ago it was very little work and poor prices.

We in this province have good reason to be proud of our association.

I might just state here that I firmly believe that my successor will have the pleasure of seeing, during the next year, our association double its membership.

We have an organizing committee that must do good work; the chairman is a man who would sit up all night to convince a master plumber of the good he must receive by becoming a member.

During the past year, I have had the pleasure of assisting in organizing Berlin, Waterloo and Mitchell, and visiting Orillia and Barrie in the interest of association work.

Gentlemen, let me once again urge upon you the necessity of provincial associations.

Respectfully,

HARRY MAHONEY,
Vice-Pres., Ontario.

BRITISH COLUMBIA.

To the President, etc.,

Gentlemen—As provincial vice-president for British Columbia, I beg leave to submit the following report:

I regret to say that I have not been as successful as my predecessor in office, but I have endeavored to get the province fully organized. It being impossible for me to personally visit the province, I communicated with a number of the leading firms in the larger towns. Some of my letters were promptly answered, others were not. A remittance came from Victoria, which I handed to the treasurer. The delay in getting our annual report from the printer prevented me from sending them earlier in the year. I trust this will not be the case this year, and that my successor in office will have the report in due time. All provinces organized should follow the recommendation re the issuing of certificates to local associations Manitoba being now represent-

ed in a live manner, its influence will certainly bear favorably on Manitoba.

JOHN McKINLAY,

Vice-President for British Columbia.

NOVA SCOTIA.

The President, etc.,

Gentlemen—Having had the honor to be appointed vice-president of this association for Nova Scotia, at the eighth annual convention held in Montreal, July 1st, 1903, it affords me much pleasure in submitting the following report. As you are no doubt aware my jurisdiction covers a considerable amount of territory, including Cape Breton, Prince Edward Island, and Nova Scotia.

I am sorry to state that the formation of a branch association at Sydney, C. B., while starting with brilliant prospects, owing to certain conditions of affairs in Cape Breton this association has gone backward rather than forward.

Our last year was about up to the general average. As I mentioned before it is a very large undertaking for me to keep in touch with the different members of my district on account of its extent.

To alleviate this in future we purpose holding an annual outing for our members and friends, taking from two to three days and combining business with pleasure. By doing this it will be the means of us all meeting, and any complaints or grievances could be fully explained and investigated.

We are looking forward to a big year, and we think prospects are good, our meetings are well attended, and the trade generally seem to be taking more interest.

With very few exceptions we find the manufacturers and supply houses living up to their agreement, and giving us every help to spread our association.

The introduction of sewerage and water into a number of the smaller towns in Nova Scotia has brought to the surface many who claim to be full fledged plumbers, who are incompetent to perform the work in anything like a sanitary or workmanlike manner. I would suggest that some action be taken by legislation to safeguard the interests of our calling.

I have to inform you with the deepest regret of the death of Charles Hermans of P. E. Island, which occurred since our last convention. Mr. Hermans was one who always took the greatest interest in all the affairs of our association.

In conclusion, I beg to say that it gives me much pleasure to be present with the noble array of Canada's greatest trade, "The Plumbers," and I feel sure that you will agree with me that we are the men who work the hardest, longest, and are the poorest paid.

Respectfully submitted,
GEORGE KINSMAN.

Halifax, July 18, 1904.

TORONTO FOUNDRY COMPANY

LIMITED

RETURNED

AUG .3 1904

Cut Book 22
Page 7
over

MANUFACTURERS
OF

Soil Pipe and Fittings

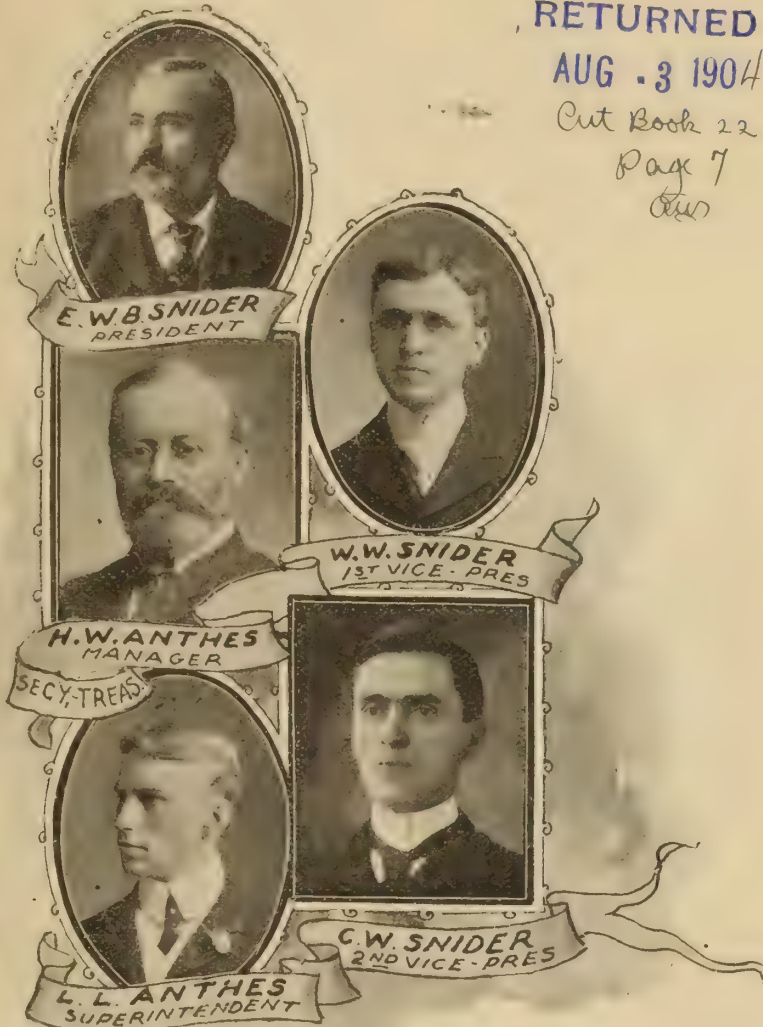
Jefferson and Pardee Avenues
and Liberty Street,

TORONTO.

—The growth of our
—business tells the
—story.

RETURNED

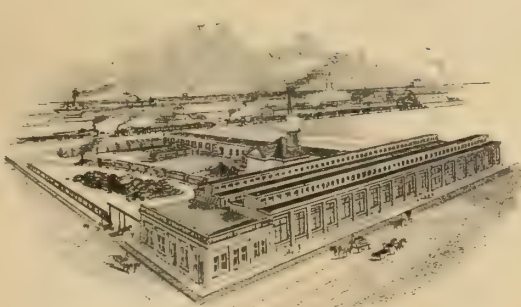
AUG .3 1904



OFFICERS OF THE TORONTO FOUNDRY COMPANY, LIMITED.

RETURNED

AUG .3 1904



1904



146, 148 & 150 NIAGARA ST.
WORKS
1894

MANITOBA.

To the President, etc.,

Gentlemen—The time has come for me to make my annual report as vice-president for Manitoba. I might say I have found it hard work and have had many difficulties to overcome to get the master plumbers in line in our city. We are so far away from other cities where they have strong associations that we cannot get advice on matters of importance without a lot of correspondence and by the time we get an answer the matter is just about dead and we must start to wake things up again when we get word back, whereas, if we could get the necessary information at once it would keep the association members alive to the good work that is being done all over eastern Canada. I might, if allowed, suggest a few matters of great importance to this convention, things that have come before your conventions other years, but as Manitoba has never put herself on record as for or against any work that has been done in convention, I wish to state a few of those matters before I drop down and out as vice-president of Manitoba, which at your last convention you did me the honor of electing to that position and I might say, I have to the best of my ability tried to fill in every way. I think you would do well to elect in all cases some one that lives in the province and does business there, as vice-president, instead of one living a thousand miles away who cannot even find time to look after affairs close to them, for when we in this part of the country read some report from one who is in no way familiar with the work and has only sat down a few hours before the convention met and wrote his report we cannot tell what is being done by the master plumbers of Winnipeg, and only goes to make your association look like a farce in the eyes of the master plumbers of this city and the west and in no way encourages them to join the national association. Another I would like to call your attention to, is in regard to a permanent secretary, one who can do the work in the same manner as it is done in the States, and if properly done will help the association a great deal. I find even in a small local association we cannot get a secretary to do all the work required of him so I cannot see how we can expect to find one that can afford to neglect his business to attend to the work of an association extending over the whole of Canada. I have not had the pleasure of meeting Mr. Knox, but have nothing but praise for the work he is doing for this association for only the honor there is in it, with lots of hard work attached. I cannot see myself how we can carry on this association without a paid secretary. One might ask, "Where is the money coming from?" I should say, "What is the secretary for, but to get it from the master plumbers from all

over the country?" Surely he could find enough time to look after that end of the association and the interests of himself. I would also suggest we use the plumbers' journals more to air the work of the association and the good it will do for the plumbers to join in with us and live up to the Halifax Resolutions. For if we don't protect ourselves we shall find the wholesales and manufacturers still continue to sell to non-members and outsiders.

In conclusion, I might say, I hope to see in the near future our association working along the same lines as some of our sister associations. Our committees are now at work on it so I will not be able to say any more about it just now. Everything looks good, as the members are anxious to better the condition of the trade in our city and the west. I



Wm. Watson, Moncton.

am sorry to say I find no association in Manitoba outside of Winnipeg.

I now desire to thank the members for the honor conferred upon me at your last convention in selecting me as vice-president for Manitoba. Trusting you will give these few suggestions due consideration, I remain,

Yours respectfully,

A. J. HAMMOND,

Winnipeg, July 13, 1904.

QUEBEC.

To the Chairman, etc.,

Dear Sirs—In submitting to you my report as vice-president of the association for the Province of Quebec, I am sorry to say that I do not find any improvement in the position of the master plumbers of this province since last year. There is nothing new and nothing better in our relations with the wholesale dealers. No more protection is given to the master plumbers than

has been given for many years back. It would be to their advantage as well as to ours if more protection was given to the trade.

As far as the association is concerned in this province, we have not yet been able to unite the master plumbers of either the Eastern Townships or of the City of Quebec. This may be a reason why united action cannot be brought to bear upon the wholesale dealers of our province.

Just now, here, we are obliged to face a pretty hard struggle between the journeymen plumbers and ourselves. The trade has been set back on account of a misunderstanding between both parties since 1st of May last.

I beg to lay before the convention those few facts believing that in your wise decisions some good may be derived to better the position of the master plumbers in this part of the Dominion.

The delay in producing my report is due to the fact of my believing to be able to be amongst you in the convention. Owing to circumstances, I am unable to attend, and no one regrets it more than myself.

I wish you great success in your deliberations, and remain,

Yours very truly,

JOS. LAMARCHE,

The election of officers resulted as follows:

Officers for 1904-05.

Past-president, Joseph Thibeault, Montreal.

President, Robert Ross, Toronto.

Vice-president, A. J. Hammond, Winnipeg.

Secretary-treasurer, J. G. Gordon, Montreal.

Treasurer, F. G. Johnson, Ottawa.

PROVINCIAL VICE PRESIDENTS.

Ontario, H. Mahoney, Guelph.

Quebec, W. J. R. Hughes, Montreal.

Nova Scotia, J. Farquhar, Halifax, N. S.

New Brunswick, W. Watson, Moncton, N. S.

Manitoba, James Mould, Winnipeg.
British Columbia.

CHAIRMAN OF STANDING COMMITTEES.

Legislative, F. Bonhomme, Montreal.

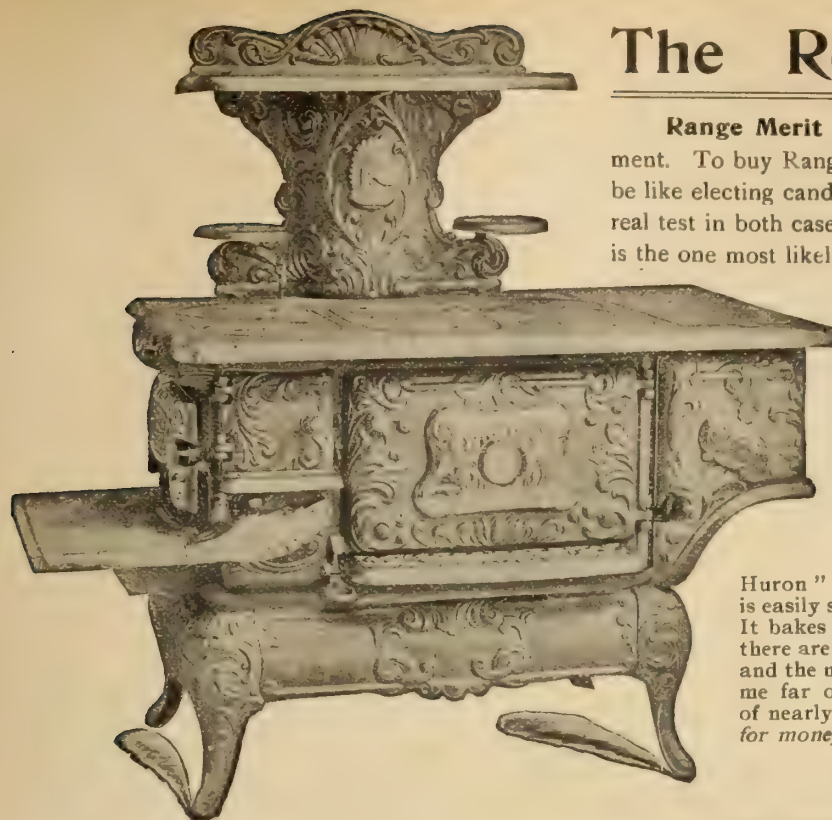
Apprenticeship, R. W. Harrison, Toronto.

Sanitary, Wm. Clarke, Hamilton.

Essay, Wm. Watson, Moncton.

The Montreal Light, Heat & Power Co., Montreal, have secured the contract for the lighting by gas the Town of St. Louis, Quebec, for a term of 25 years. The price will be \$1.20 per 1,000 cubic feet, and \$1 for fuel gas.

Thamesville, Ont., has decided to install a waterworks system, and also to purchase and operate the electric lighting plant.



The Real Test is Use!

Range Merit cannot be judged by the adjectives in an advertisement. To buy Ranges merely on the strength of a maker's rhetoric would be like electing candidates to office on their own recommendations. The real test in both cases is merit. The range that has already shown merit is the one most likely to do so in the future.

Crown Huron Ranges

are the nearest to the goal of perfection. Under every condition and use they have satisfied the most exacting housekeeper.

NEWMARKET, July 6, 1904.

The Western Foundry Co., Limited,
Wingham, Ont.

DEAR SIRs,—I never wrote a testimonial before, but I think in this case it is a duty. The "Crown Huron" range works admirably with any kind of coal. It is easily started, easily regulated, and *exceptionally easy on fuel*. It bakes well, cooks well, and looks well. When I tell you that there are about a dozen boys and girls interested in this range, and the mother vitally so, and she is satisfied, you will not think me far out in saying that during a married life of nearly thirty years, *I never got better value for money invested.*

Yours truly,
G. PEPPIATT,



Crown Huron, Moderate-Priced, Quality Considered.

Manufactured by

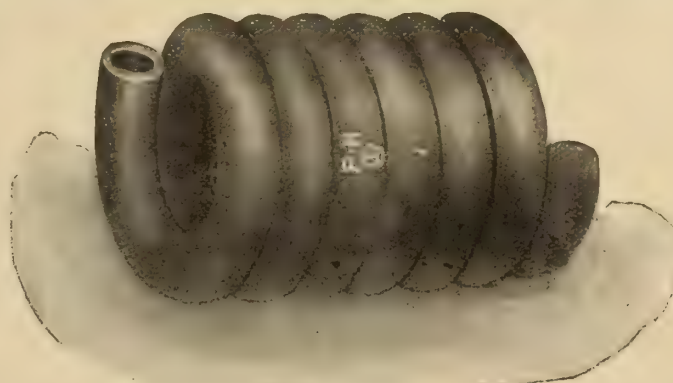
The Western Foundry Co., Limited, Wingham, Ont.

HURON Stoves, Ranges and Furnaces.

TELL YOUR FRIENDS ABOUT IT!

**Pipe That
is Pipe.**

P.H.



**Pipe That
is Pipe.**

P.H.



THIS PIPE WAS TAKEN AT RANDOM FROM STOCK AND WAS BENT COLD.

**Wrought Merchant Pipe
Black and Galvanized**

PAGE-HERSEY IRON & TUBE CO., LIMITED

GUELPH, CANADA.

THE IMPORTANCE OF VENTILATION.

By F. S. Keith.

RETURNED

AUG 9 1904

Lit Book 22

Page



Fan and Motor.

NOTHING more important enters into the consideration of the plumber and sanitarian than that of proper ventilation. Let the heating apparatus be ever so

perfect, the fittings and connections of the best and the workmanship without reproach, yet if no serious thought be given to the proper circulation of pure air in a building, one of the main points to be considered by the domestic engineer is lost sight of. This applies more particularly to large public buildings, hotels, theatres, churches and schools, but even so, the air supply of our dwellings should be by no means left to chance or the opening of a stray window. This holds to a greater extent in houses where gas is used, for an ordinary gas burner vitiates the air at about the same rate as the breathing of three or four persons.

The amount of carbon dioxide present in a building or a room is generally considered as the index of ventilation, the percentage of which may easily be determined by a simple test. In the Encyclopedia Britannica it is stated that the standard for pure air is four parts in 10,000, and the excess over that is taken in determining the adequacy of the air supply. In large inland towns the above is found to be the average relative proportion, while in the country and in seaside towns from two to three parts only in 10,000 are found. Air in which people dwell, according to authorities, should not under any circumstances be allowed to contain more than ten parts in 10,000, while some maintain that air containing eight parts is no longer good, and recommend that six parts be taken as the maximum permissible in good ventilation.

Another feature to be considered in discussing the quality of pure air is the number of micro-organisms present. In well ventilated rooms they vary from 1 to 20 per litre (61 cubic inches) and in close school rooms as many as 600 per litre have been found.

The production of carbonic acid by an adult is given as 0.6 cubic feet an hour, and on this fact is based the calculation for the amount of fresh supply of air to keep up a certain standard of purity. It follows that in an hour a pollution of

one part in 10,000 is produced in 6,000 cubic feet of air. If the excess of carbonic acid were to be kept down to this figure it would be necessary to supply 6,000 cubic feet of fresh air per hour. If the permissible excess be two parts in 10,000, half this amount would suffice, and so on. Thus, if only 1,000 cubic feet were supplied the excess would be six parts in 10,000, making ten in all, which is considered, as stated above, no longer good.

Large rooms are considered healthful, not only on account of the space available for a larger supply of air than in smaller ones, but also due to the fact that the greater wall space provides more opportunity for the casual entrance of fresh air and a better chance for diffusion. Also a greater volume of air may be passed through in a given time without causing disagreeable draughts. A general idea of the cubic capacity per inmate allowed by law or by custom in certain cases in England is given from the following: Hospitals, 1,200 cubic feet, middle class houses 1,000, barracks 600, good secondary schools 500, workhouse dormitories 300, London lodging houses 240, one roomed houses 212. Comparing these with the figures already given, and allowing the lowest permissible degree of purity (10 parts in 10,000), it will be seen that if no fresh supply of air were allowed the inhabitants of a middle class house would render the air unfit for living in one hour, and that the sleeping rooms of the poor would fall below the standard in 13 minutes.

These facts and figures tell the story all too strongly of the paramount importance of proper and systematic ventilation in all habitations. They show clearly how absolutely necessary to health is an adequate supply of fresh air, for it is only reasonable to state that one breathing vitiated air constantly cannot be healthy. The only way to maintain a high standard in this respect is by the circulation, at all times, of a good supply of outside air. To do this three things are necessary: An inlet or inlets for the air, an outlet or outlets for the air, and a motive force to produce or maintain the current. There are two methods of accomplishing this, one called natural and the other mechanical. The natural method is to make use of the wind, the elevated temperature of the room's atmosphere, and the draught of fires used for heating. The artificial

or mechanical ventilation is accomplished by driving the air by fans or furnaces or other contrivances.

Domestic ventilation is generally left to natural means by providing proper inlets and outlets for the air and depending on the inside temperature to cause the circulation. In this the chimney plays an important part whether there is a fire in the building or not, as the air within an inhabited room is generally warmer than that outside. Disagreeable draughts may be avoided by providing larger inlets, thus distributing the flow. In most cases windows are used as inlets, to some of which special devices are attached. The Tobin tube is extensively used, and seems the best natural method, as no draughts are felt from its use. It consists of a short shaft of metal plate or wood which leads up the wall from the floor level to a height of five or six feet. Its lower end communicates with the outer air through an opening in the wall, and from its upper end, which is freely open to the room, the current of fresh air rises in a smooth stream. In Winter this air may be heated by means of a coil inside the tube.

Formerly mechanical ventilation found its greatest application in mines, but is now universally adopted in large buildings. Two methods of accomplishing this are called vacuum and plenum. In the former the motive force is applied at the outlets. Air is drawn from the rooms, and their pressure is less than that of the outside atmosphere. In the latter the motive force is applied at the inlets, air is pushed in and the pressure within is greater than outside. The plenum method has distinct advantages. It makes the air escape instead of coming in at every crevice and casual opening to the outer air. It avoids drawing foul and mouldy air from sewers and basements, and with it more than with any other one can guard against the disturbing influences of wind. In the plenum method the air is driven by pumps or by fans, and in the other circulation is produced by fans or by heating the air in a long vertical shaft.

Whether the method adopted by vacuum or plenum, natural or mechanical, the fact remains that nothing is more directly essential to the health and comfort of the inmates of any home than systematic and efficient ventilation.

The hardware and plumbers' establishment of H. R. Manders & Co., Owen Sound, was damaged by fire on July 20. The loss is covered by insurance.

A NEW SAMPLE ROOM.

For the convenience of our customers we have opened a new sample room at 520 CRAIG STREET, MONTREAL. Here we have a complete stock of porcelain and enameled

BATH TUBS, BASINS, LAVATORIES, CLOSETS, ETC.

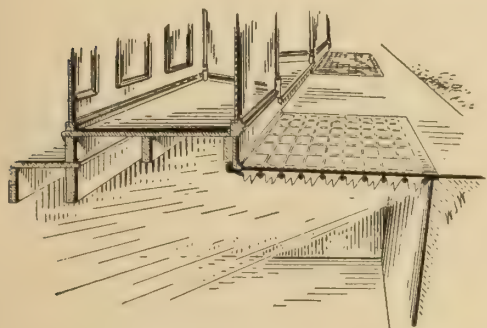
We will quote, on request, prices that are bound to interest you.

AMiot, LECOURS & LARIVIERE, Inc., Montreal, P.Q.

HEAD OFFICE: 593 ST. LAWRENCE ST.

STORE ALTERATIONS

Now is the time—do not leave until winter months. Send for information and



**BEST METHOD
of LIGHTING
STORES,
BASEMENTS,
CELLARS.**

**LUXFER PRISM CO., Limited,
100 King St. West,
TORONTO.**



Built for Business

Plenty of makes of stoves on the market, yet no one quite resembles ours. When we began making a range, we had three watchwords:—

Economy Efficiency Appearance

For example, we have departed somewhat from the common idea of much carving on our castings, and we know, and you know, that this is a good move.

The Empire Queen Range

is easy to clean, looks well, and has all the latest points which go to make up a first-class Coal and Wood Range—perfectly proportioned fire box; duplex grates; heavy, sectional cast-iron linings for coal; and separate wood grates. A very important feature is the flues. These are splendidly constructed, and give remarkable results. The chief selling points of The Empire Queen Range, are: **Easy to Clean, Appearance, Quick Baker, Economical in Fuel.**

Send for illustrated booklet which contains some of the most forceful and convincing testimonials you have ever read.

**The
Canadian Heating and Ventilating Co.**

**Makers Limited
Owen Sound, - Ontario**



HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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Vice-President—Robt. Ross, Toronto.
Secretary—H. A. Knox, Ottawa.
Treasurer—F. G. Johnson, Ottawa.

PROVINCIAL VICE-PRESIDENTS.

Ontario—H. Mahoney, Guelph.
Quebec—Joseph Lamarche, Montreal.
Nova Scotia—J. Kinsman, Halifax.
New Brunswick—W. Watson, Moncton.
Manitoba—A. J. Hammond, Winnipeg.
British Columbia—J. McKinlay, Ottawa.

ONTARIO PROVINCIAL ASSOCIATION.

OFFICERS.

President—Wm. Mansell, Toronto.
Vice-President—W. J. Walsh, Hamilton.
Financial-Secretary—Lewis LeGrow, Toronto.
Treasurer—J. K. Wilson, Toronto.
Secretary—W. H. Meredith, Toronto.
Executive Committee—The officers and H. Mahoney, Guelph; S. Mellon, Hamilton, and E. H. Russell, London.

MONTREAL.

President—Thos. O'Connell.
Secretary—J. Gordon.

TORONTO.

President—Robert Ross.
Vice-President—Geo. H. Cooper.
Secretary-Treasurer—W. H. Meredith.

HAMILTON.

President—S. Mellon.
Secretary—T. H. Davies.

OTTAWA.

President—Gil. Julien.
Secretary—J. Thorpe Blyth.

LONDON.

President—B. Noble.
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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, July 22, 1904.

pipe are in unusual demand. Prices remain unchanged.

Range Boilers—A steady demand is reported. Prices are steady, as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—There is an unusually good demand. Prices remain steady at former quotations. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs. extra; f.o.b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—Business is unusually brisk now. Discounts continue, as follows: Light soil pipe, 3 to 6 in., 50 and 10 per cent; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

Iron Pipe and Fittings—Last week's conditions still prevail. There is still no change in the situation. As has been the case recently, it is impossible to quote with exactitude, as there is no pretence that nominal prices are being maintained closely. Subject to concessions, we quote nominal prices as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Solder—There is no noted change in the price of solder this week. Bar solder is quoted at 17 1-2c, and wire at 18c.

Soldering Irons—Prices are as follows: 1 to 1 1-2 lbs., per lb., 37c; 2 lbs. and over, 34c.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street, East.
Toronto, July 22, 1904.

CONDITIONS on this market have not changed since last issue. The volume of business is very good this week, and is on the increase. The close competition in iron pipe and fittings has in no way diminished, and dealers are still cutting prices to almost actual cost. From what can be learned from the master plumbers from different parts of Ontario who are attending the convention of the National Master Plumbers' Association in Toronto, business is even more brisk in outside towns and cities than it is in Toronto.

Lead Pipe—Business is fair. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—A good trade is doing, with prices easy. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe and Fittings—Owing to the cutting in prices the market quotations can only be nominal. There is a good business being done. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1-2 to 70 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

Iron Pipe—The low prices noted last week still prevail. A good trade is being done at the figures. We quote f.o.b. Toronto as follows: Black pipe, 1-2 in., \$1.85 to \$1.95; 1-4 in., \$1.90 to \$2.05; 3-8 in., \$2 to \$2.25; 1-2 in., \$2.25 to \$2.35; 3-4 in., \$2.85 to \$3; 1 in., \$4 to \$4.25; 1 1-4 in., \$5.75 to \$6; 1 1-2 in., \$7 to \$7.25; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.65 to \$2.80; 3-8 in., \$2.80 to \$3; 1-2 in., \$3.15 to \$3.25; 3-4 in., \$4 to \$4.10; 1 in., \$5.90 to \$6; 1 1-4 in., \$8.25 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

Enameled Ware—Prices are firm, but there is no likelihood of an advance. Trade still continues active. We quote: "Standard," 5 1-2 feet rolled rim, first quality, at \$21.60; second quality, \$15.50 to \$16.

YIELDING only slightly to the weather conditions the plumbing supplies market has not fallen to any great extent within the past few weeks, being much better than in other years. The general condition of business is very satisfactory. Lead pipe and soil

THE GRUNDY STOVE CO.,

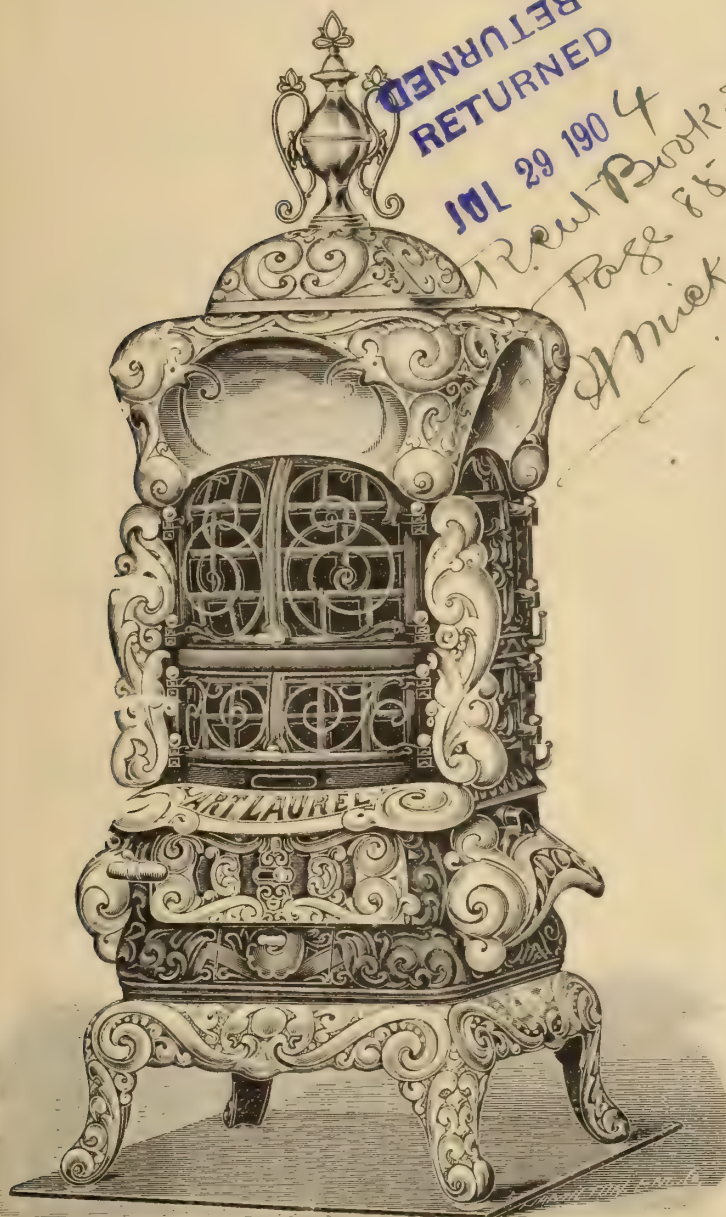
LIMITED

OF GUELPH, CANADA

MANUFACTURERS OF 1901

Art Laurel Double Heater

with or without oven, the Acme of the
20th century Base Burners.

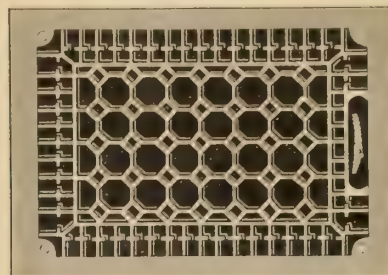


ALSO manufacturers of the unsurpassed **Silver King** Ranges, being the most economical, best proportioned, most unique and elaborately decorated ranges in the market, possessing more patented features than all other ranges. Among them the oven regulator, invented for the purpose of making the oven bake in the bottom under all conditions; also, the patented feature for dislodging the ashes that accumulate in the back end of the fire-pot, and thus allowing the heated air to travel more freely around the oven, giving fully 20% more heat than any other range, with the same amount of fuel.

Dealers will consult their interest by handling the best to be had. Write for catalogues, discounts, etc.

The Grundy Stove Co., Limited, Guelph, Ont.

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.

The Royal Buffalo

HOT WATER HEATER

RETURNED

AUG . 3 1907

Art Book 22

Page 6



This is our own patent and is manufactured exclusively by us. Our guarantee goes with every one.

The Dominion Government and large institutions use them throughout Canada. They are also in the best residences and bank buildings everywhere.

Write for particulars and prices.

The H. R. Ives Co., Limited

HARDWARE MANUFACTURERS, Etc.

TRADE ONLY SUPPLIED

MONTREAL

How Cast Iron Soil Pipe is Made.

TO see a pile of cast iron soil pipe the average plumber might naturally infer that the foundry process by which they were made is a comparatively simple one. But a visit to an up-to-date plant, like that of the Toronto Foundry Co., for instance, would soon remove such a misconception.

While the product is not nearly so elaborate in appearance as many castings familiar to us all, it is one that entails in its manufacture increasing vigilance to keep up to the standard set and ready progressiveness to keep raising the standard as modern competition demands.

If one were to enter the moulding shop any time between two and five o'clock in the afternoon a large staff of men would be found pouring the molten iron from the big cupola to the flasks, in which the molds had been prepared earlier in the day. This process is decidedly fascinating to one not familiar with moulding operations.

When the iron here cools it is removed from the flask and taken to the tumbling mill, where roughness is smoothed away and the pipe cleaned of sand. Nearby are grinding machines where the ends are made smooth and straight.

From the cleaning room the pipe or fittings are moved on to the dipping room, where each one is saturated with a transparent liquid, the chief ingredients of which are oil and benzine. The advantage of the transparent coating is that a defect can at once be seen in a pipe so coated, whereas when a tar coating is applied no defect can be seen. By this means the Toronto Foundry Co. are in a position to make certain the quality of every length of pipe sent out. To guard against inferiority each pipe is tested individually.

The manufacture of cast iron soil pipe and fittings is an industry that seems destined to grow in magnitude and importance throughout the Dominion. The Toronto Foundry Co. started as manufacturers of this line exclusively in 1891, and under the pushing management of H. W. Anthes and, during the last few years, of his son L. L. Anthes, the firm have found a steadily increasing demand for their product. Their connection extends through the supply houses to every part of the Dominion. The Northwest at the moment is calling for a particularly large share of their production.

The success of the Toronto Foundry Co. is attributed in large measure to

the fact that they manufacture but one line, cast iron soil pipe and fittings, and take every means to ensure a first-class production.

Keeping Busy at Wingham.

THE Western Foundry Co., Wingham, Ont., are finding some difficulty in producing a sufficient number of Crown Huron stoves and ranges to cope with the demand. As the features of this stove have been described in Hardware and Metal, the trade will probably understand why this range has "caught on" with the trade so well.

The Western Foundry Co. also make wood cooks, wood heaters, coal heaters, box stoves, parlor heaters, hotel ranges, etc., and are just completing patterns for a line of wood and coal furnaces. They are eager to send their literature to the trade.

Building Notes.

ASIX-STOREY warehouse, 50x125 feet, will be erected at 54 Wellington street west, Toronto, for John W. Cowan. In the construction of this warehouse will be introduced what is known as heavy "mill construction," the floors throughout being 5 inches thick, of hard southern pine and maple. The building will be occupied by Cockburn & Ray, wholesale milliners. The construction work has been awarded to John McLeod, Kingston.

A postoffice is to be erected in Levis, Quebec.

A new school house is to be erected at Pilot Mound, Man.

A new court house is being erected in Sherbrooke, Quebec.

A new engine house and office will be erected at Pirate Harbor, N. S.

John M. Chisholm is erecting a residence on Donald street, Winnipeg.

The Canadian Bank of Commerce are building a branch bank in Galt, Ont.

Stratford Hotel, Limited, are building a new hotel building at Stratford, Ont.

The construction of Fonseca Hotel, Higgins avenue, Winnipeg, has commenced.

Joseph Polson has commenced building a handsome residence on Rose street, Winnipeg.

A \$125,000 addition is being built to R. J. Whitla's dry goods warehouse at Winnipeg.

The Scott Furniture Co., Winnipeg, are erecting a \$100,000 warehouse at that city.

A church is to be erected in the

Anglican parish of the Ascension, in Montreal District.

Plans for three large brick residences on Farley street, Winnipeg, are being prepared by Paul Clemens.

Messrs. Gudlangson and Olson, Winnipeg, are excavating cellars for 40 dwellings in various parts of the city.

The warehouse of the Miller-Morse Hardware Co., Winnipeg, is now well on to completion. The "mill construction" is being used.

The excavation for the warehouse of Telfer Bros., the business block of D. F. Allman, and the Watson terrace, on Spence street, Winnipeg, have all been completed.

Nearly 600 residences are being erected in Winnipeg this season. Of these many are being put up by contractors, and the demand is such that in many cases they are bought months before completion.

A new business block is being erected in Calgary by Alderman Underwood. The block will be double fronted, 130x60 feet. There will be 11 stores in the building and 40 rooms, consisting of offices and chambers. The designer is Architect Lawson of Calgary.

Will Make Wire Tacks, etc.

THE Hamilton Wire Tack & Specialty Co. is the name of a new firm which has lately commenced manufacturing in Hamilton a few specialties which they intend selling through the hardware trade. The most important of these are wire tacks, which are made from wire and are similar to the wire nails which have become so popular during the last few years.

The ordinary tack tapers to a point almost from the head of the tack. The wire tack, however, is pointed at the very end, and it is claimed takes a much better hold in the wood. The price of the tacks is about the same as the sheet metal tacks.

Another line is a fruit jar wrench, which is an ingenious device for tightening or loosening the sealers on an ordinary fruit jar. This will retail at about ten cents. An article such as this should have good sale at this season of the year.

A carpet beater was put on the market last Spring by this firm and has had a good sale. It is made of wire, and is somewhat heart shaped. It has a rod in the middle and it is on this part that the patent has been allowed. It retails for 15c.

The firm would be glad to answer any inquiries with reference to any of these articles.

MONEY IN THIS LEAD

It's past the experimental stage and everybody knows it—both the dealer and the consumer—the imitator knows it too, because

Ramsay's Exterior

RECORDED

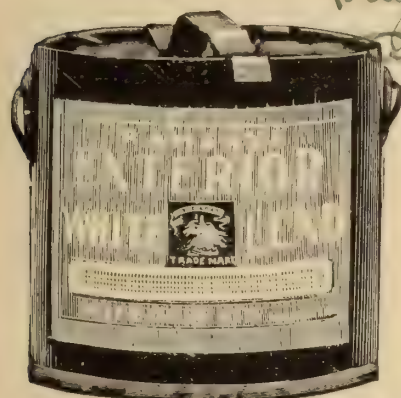
SEP 15 1904

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Page 60

has been imitated in name and label. We have proved most conclusively that **RAMSAY'S EXTERIOR LEAD** is superior to pure lead or any other lead, whether imported or otherwise. This is a lead the painter wants.

We have nice booklets to help the sale. It costs less than pure lead and sells for more.



A. Ramsay & Son

Paint Makers

Est'd.
1842

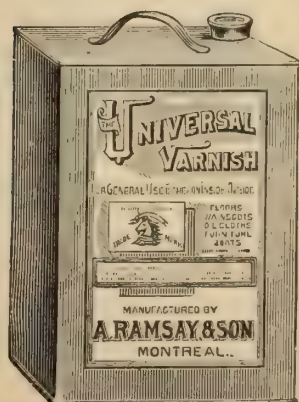
Montreal

YOUR VARNISH TRADE

Try a varnish that will sell and keep its reputation, while making customers for you. Let it be a varnish already established, long tried and proved. Then you make a profit, as good varnishes pay the dealer well.

Ramsay's Universal

is a seller, returns handsome profits, makes a reputation, satisfies all. It's for boats, counters, desks, doors, carriages, floors, etc. Ask for our booklet explaining about the rebate that goes with each can to your customer and how we pay it—not you.



A. Ramsay & Son

Est'd
1842

Montreal

"Pipe that is Pipe."

AMONG the newer industries to locate in Ontario, perhaps none have shown the same spirit of advancement as the Page-Hersey Iron & Tube Co., Limited, of Guelph. This concern, which moved from Montreal in the Fall of 1902, have built a series of large buildings in Guelph, comprising an up-to-date pipe factory, machine shops, and galvanizing plant, and they are the makers of P-H Crown brand of tubing, which of late has been in such heavy demand all over the Dominion.

A visit to their plant shows modern machinery applied with modern methods and the result is a better standard of wrought merchant pipe than has before been possible in this country.

Profiting by their Montreal experience, the firm aim at producing the best article possible, combined with cheapness, and this end is brought about in P-H Crown brand, every few feet of which bears the company's stamp, viz., P-H Crown.

The company have been the recipient of many flattering testimonials regarding the quality of their tubing, and these have undoubtedly been an incentive to the firm, since it shows their efforts to better the pipe trade have been both duly recognized and appreciated. Every plumber and user of pipe realizes fully the difference in work done with good or bad pipe, and no doubt the success that has attended the company's efforts to produce something above reproach will be both lasting and lucrative.

The Standard Foundry Co.

The Standard Foundry Co., of Longueuil, Province of Quebec, whose advertisement appears in this issue, are operating the foundry in that town formerly owned by the H. R. Ives Co. They are now manufacturing an extensive line of ranges, heaters and hollow ware, and under progressive management are bound to make a success. A specialty with this firm is their manufacture of fine steel castings. They employ an expert pattern maker and hence are able to supply patterns from drawings furnished by their customers.

A New Sample Room.

A handsome new sample room has been opened recently at 520 Craig street, Montreal, by Amiot, Lecours & Lariviere. As many readers of Hardware and Metal are aware, this firm's headquarters are at 591 and 593 St. Lawrence street, but at the request of many of their patrons they decided to open a sample room in the down town district nearer the other wholesale establish-

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1.000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " " 6 months.....	17 00
" " " " 3 months.....	10 00
50 " " " " 1 year.....	17 00
" " " " 6 months.....	10 00
25 " " " " 1 year.....	10 00

SITUATIONS VACANT.

WANTED—For Manitoba—Experienced tinsmith; knowledge furnace work necessary. Apply, with references, to Merrick, Anderson & Co., Winnipeg. (31)

WANTED—Capable man, experienced in a general line of heavy hardware, also an assistant to the same position; in both cases apply stating experience, age and salary expected to Box 40, HARDWARE AND METAL, Montreal. (30)

WANTED—By a wholesale hardware firm in Montreal capable claims clerk; apply stating experience and salary expected to Box 41, HARDWARE AND METAL, Montreal. (30)

WANTED FOR MANITOBA—Young man, tinsmith, with four to five years experience, must understand stoves and hardware; wages \$50 per month; steady work, providing satisfactory. Apply with references to Merrick, Anderson & Co., Winnipeg. (31)

SITUATIONS WANTED.

BY A1 hardware office man; long experience; would take partnership; best of references. Address Box 160, HARDWARE AND METAL, Toronto. (31)

MANAGER, traveller or assistant—thorough knowledge hardware, paints and colors; 20 years' experience; thoroughly energetic; very smart salesman; total abstainer; age 35; highest credentials. "Dominion," HARDWARE AND METAL, Montreal. (31)

MANAGER, thorough knowledge hardware; 20 years' varied experience; used to organization and administration of a large corporation; undoubted ability; total abstainer; age 35. "Independence," HARDWARE AND METAL, Montreal. (31)

YOUNG man of good character wishes to learn hardware business; references; address Box 162, HARDWARE AND METAL, Toronto. (31)

AGENCY WANTED.

A YOUNG man about to commence business as manufacturers' agent and commission merchant would be pleased to communicate with any party wishing to be represented in the Maritime Provinces. Mfg. Agent, P.O. Box 273, St. John, N.B. (30)

TOOLS WANTED.

WANTED—A second-hand outfit of tinsmithing tools; state price and shape tools are in. J. H. Bell, Mattawa, Ontario. (30)

BUSINESS CHANCES.

HARDWARE business wanted in live city or first-class town of not less than five thousand population, located in good farming community. Apply Box 146, HARDWARE AND METAL, Toronto. (25tf)

HARDWARE business for sale, in good live village in Western Ontario; good clean stock of about \$2200; owner must sell on account of ill-health. Apply Box 161, HARDWARE AND METAL, Toronto. (31)

RETAIL hardware business for sale; one of the largest and in best location in Toronto; largely cash business; in good running order; turnover for 1903 over \$35,000; can easily be increased to \$50,000; stock and tools about \$9,000. For particulars and terms address Box 152, HARDWARE AND METAL, Toronto, Ont. (28tf)

STAMPED ENAMELED HOLLOW WARE

THE largest buyer in Europe desires to place his services at the disposal of the principal buyers in Canada; commission terms; 20 years devoted exclusively to these goods; unrivalled knowledge; unique experience. Apply Box 67, HARDWARE AND METAL, Montreal. (30)

Orlan Clyde Cullen, C.E.L.L.M.

Counselor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office.

U.S. and Foreign Patents, Caveats, Copyrights and Trade Marks. Military and Naval Inventions a specialty. Address,

Box 264, Station G, Washington, D.C.

GUN SHOP and MODEL SHOP

Warren White Sulphur Springs,
Totten P.O., Virginia.

RETURNED

Do you use a
**Roller
Awning?**

If not, why not? We make the best roller awning in Canada. We can operate a 60-foot awning on one roller from one end easily and safely. Write or call for particulars. The best is none too good for you.

WM. BARTLETT & SON
Tents, Awnings and Flags
16 Adelaide St. West, TORONTO.

WE WANT WORK

Old Stove Parts Re nickeled Like New.

Put your Stove parts in a box and send to us. We do the rest.
Good as the best. Cheap as the cheapest.

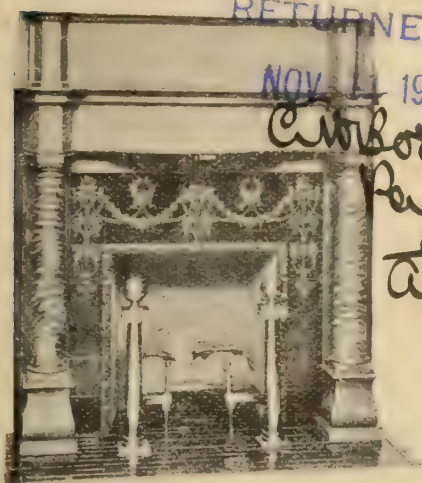
Long Distance Phone, Main 2993.

FAIRGRIEVE MFG. CO.,
TORONTO.

MANTELS, GRATES, TILE, Etc.

*This is a good line for the
Hardware Trade to sell.*

NICE GOODS GOOD PROFIT
NO TROUBLE



*If you are interested write us for
catalogue and prices.*

The Batty Stove & Hardware Co.
76 York St., TORONTO

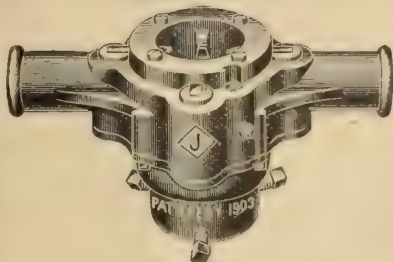
Order a stock of

"Windmill Best" Galvanized Sheets

Cut Prices Made by Quality Right
John Summers & Sons, Ltd.
STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, - Montreal



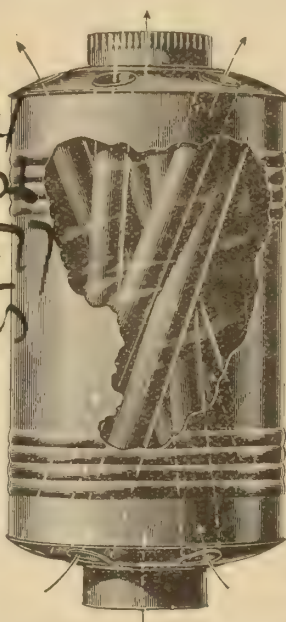
It is a fact that one man with our **PATENT
PIPE DIE** can easily do the work of two
men with any other. Send us your address
and we will explain HOW and WHY.

A. B. JARDINE & CO.
Mfrs. TAPS and DIES.
HESPELER, ONT.

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.



COLE'S SPIRAL TUBULAR RADIATOR

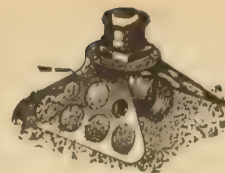
Can be used
on any stove.

Best radiator made
—at half the cost
of inferior goods.

Only radiator
made adapted for
soft coal.

Size pipe collar,
5, 6 and 7 inches.

For Sale by
E.T. Wright & Co.
Hamilton, Can.



"Pullman"
Lawn Sprinkler
IS YOUR
ORDER IN ?
Send for Folder No. 14.
PULLMAN MFG. CO.
Rochester, N.Y., U.S.A.

MODERN MAGIC!



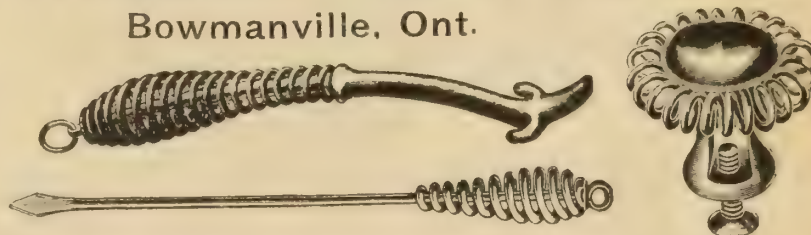
No more matches required to light the gas.
The "Ignite" Mantle lights when the gas is turned on.
Write for booklet and samples.

The International Gas Appliance Co., Limited
164 BAY STREET, TORONTO, Canada

The Bowmanville Foundry Co., Limited

Bowmanville, Ont.

Makers
of
Good
Goods
Only



A Stove Lining

Plastered in like mortar—anyone can do it—gets
hard as iron—no heat can destroy it—clinkers won't
adhere to it—cheaper than brick.

Sterne's Asbestos Stove Lining

is a blessing to both dealer and home-maker. Guar-
anteed with a "money-back" guarantee.

Send for circular and price list.

Manufactured only by

G. F. Sterne & Son, Brantford, Ont.



Standard Technical Works

Books Written for the
Metal Merchant or
the Metal Worker.

A Manual of Mechanical Drawing.

By Phillip D. Johnston; 65 full-page plates and 2 folding plates, with full text and 134 illustrations; cloth.....\$2.00

Domestic Electrical Work.

By W. A. Wittbecker. How to wire buildings for bells, alarms, annunciators, and gas lighting from batteries. 55 pages, illustrated; paper, 25c.; cloth..... 50c.

Ladd's Discount Book.

By W. J. Ladd, showing net of any sum at all discounts; cloth, \$3.00; double indexed\$4.00

Blue Print Making.

A pamphlet. Directions for Constructing and Printing Frame, Preparing the Paper and Making Prints of Various Kinds. 28 pages 25c.

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By Addison H. Clarke. Specifications for mixing and using cements. 96 pages....\$1.00

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By Thos. D. West. Showing processes involved in its treatment, chemically and physically, from the blast furnace, through the foundry, to the testing machine. 627 pages, 153 illustrations....\$3.00

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Best and Most Approved Methods of Preparing and Cleaning all Metals for Electro-Plating and Polishing. 114 pages, illustrated 80c.

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Laying flat and standing seam roofing, cornice shop practice and skylight construction, 175 pages, 170 illustrations and 13 plates\$1.50

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By Wm. G. Snow. Comprehensive treatise on warming buildings with hot air, with appendix on furnace fittings, 170 pages, 90 illustrations, cloth.....\$1.50

Plumbing Problems.

House drainage and plumbing, 309 pages, 146 illustrations.....\$2.00

Practical Hints on Joint Wiping.

For beginners in plumbing, 66 pages..... 25c.

Kitchen Boiler Connections.

A selection of practical letters and articles relating to water backs and range boilers. Fifth edition, enlarged\$1.00

Enquiries for above books should be
sent to The Editor

HARDWARE AND METAL,
Montreal **Toronto**

ments. The result of this decision is one of the handsomest sample rooms in the City of Montreal. It is much appreciated by both city and country customers.

Without doubt, one of the most pushing and energetic firms in Montreal is Amiot, Lecours & Lariviere. Their retail store is one of the best appointed in the city, and their wholesale business has lately made phenomenal progress. F. E. Lariviere is in charge of the wholesale department on St. Lawrence street, and J. E. Lecours has charge of the Craig street sample room. In the new sample room special attention is paid to the plumbing supplies department.

A Metallic Cinder Sifter.

C. M. Cutts & Co., Toronto Junction, manufacture a metallic cinder sifter. On May 17, 1904, patent was allowed for this in United States as well as Canada. The sides of this sifter are made of iron, which makes it neat and light. Each and every wire in the bottom is all folded in by a patent double lock fold, making it impossible for a strain on the wire to loosen it, and causes the wire to remain in place as long as the sifter lasts. They have attached a wire bale on the front end of the sifter, so that it can be hooked on a fence or post to take the weight off the operator while rocking or oscillating. Or the bale may be turned down to rest on the ground and be operated in the same way. The sifter is also supplied with a metallic cover to prevent the dust from rising while operating. They also make in connection with the sifter a perfect dustless proof galvanized iron box which may be used near the furnace. By this means the ashes may be sifted without any dust.

Business Changes

ONTARIO.

THE stock of Modiste Laviollette, general merchant, Clarence Creek, has been sold at 42c on the dollar.

The business of R. B. Scriven, dealer in tinware, Otterville, is advertised for sale.

C. A. Graham, carriage maker, Napanee, has been burned out. Loss covered by insurance.

The stock of Fraser, Johnston & Co., wholesale saddlery, and hard-

"A Record, Not a Prospectus."

Mr. Fielding said in a recent speech at Toronto, that he would present "a record, not a prospectus."

That is what we wish to do to-day with reference to "C" brand Horse Nails.

Our Company has a record of thirty-nine long years in making Horse Nails: our works being established in Montreal in the year 1865, and are the oldest and largest in Canada devoted to the exclusive manufacture of Horse Nails.

The record of the "C" brand Horse Nails for that long period shows that they have always been accepted as the standard—that means they were the best—they are still the standard to-day.

The record of sales shows that there are more "C" brand nails sold in Canada than any other; we believe nearly equal to all the other brands put together.

The record of current prices for thirty-nine years shows that no other brands of Horse Nails made in Canada have ever been quoted in the open market at prices equal to the "C" brand, which is a confession on the part of all other manufacturers that they do not value their nails as equal to the "C"—that is their record!

We would like to record every Dealer and Farrier in Canada as purchasers of "C" horse nails this year. Will you buy them the next time you order? Ask the Farrier to whom you sell them to note carefully the results. He should find every nail perfect and ready to drive, and that they will hold on the shoe longest, and be free from split nails, or heads flying off; a common fault with low-priced nails.

We shall be pleased to furnish, on application to us, free samples of "C" nails for distribution and trial among your Farrier customers.

**CANADA HORSE NAIL
COMPANY, MONTREAL.**

ware Dealers, Hamilton, was advertised for sale by auction for the 21st inst.

The Centrifugal Windmill & Mfg. Co., Limited, have stock, machinery, etc., advertised for sale by tender.

QUEBEC.

Downham & Hastings, electricians, Montreal, have dissolved.

L. A. Robitaille, hardware and furniture dealer, Quebec, has assigned.

C. M. Dominique, has registered as president of the Oswego Coal Co., Limited, Montreal.

J. A. & J. O. Duplessis and J. A. Dugre have registered under the style of Duplessis, Dugre & Co., machinists, Three Rivers.

The assets of Joseph Nadeau, lumberman, Quebec, have been sold.

Partnership has been registered by A. Heon & Cie., sash and door manufacturers, Shawinigan Falls.

The B. & C. Paper Box Co., manufacturers, Montreal, have dissolved partnership, Joseph Chalifous registered.

J. Beaudreau and J. H. Bertrand have registered under the style of Beaudreau & Bertrand, blacksmiths and carriage makers, Three Rivers.

F. H. Hopkins, James J. Rosevear and R. A. C. McNally have registered under the style of F. H. Hopkins & Co., dealers in railway and contractors' supplies, Montreal.

BRITISH COLUMBIA.

The plant of the Albion Iron Works Co., Victoria, has been leased to the B. C. Marine Railway Co.

R. L. Newman has acquired an interest in the Victoria Machinery Depot Co., Limited, Victoria.

MANITOBA AND N.W.T.

W. Buxton, harness dealer, Kenlis, has removed to Abernathy.

L. F. Sherrin, hardware dealer, Holland, has sold out to Keachie & Lea.

N. Rosen, general merchant, late Virden, has assigned to C. H. Newton.

The Birtle Cement Building Block Co., Limited, Birtle, have been incorporated.

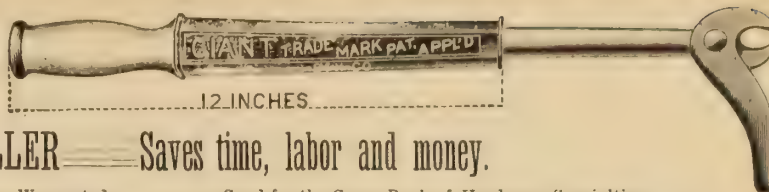
W. C. Bond, hardware dealer, Gladstone, has sold out to Black & Conley.

J. O. Piper, general merchant, Trout Lake City, has gone out of business.

An extension has been granted to Louis Walsh, general merchant, Yorkton.

Hamelin Bros. & Co., general merchants, Melita, have opened a hardware store at Creelman, N.W.T.

GENUINE
GIANT
NAIL PULLER



Saves time, labor and money.

Every Puller Warranted.
SMITH & HEMENWAY CO.

Mfrs. of Cutlery and Hardware Specialties.
206 BROADWAY, NEW YORK CITY.
Canadian Sample Room: 215 Coristine Bldg., MONTREAL.

Send for the Green Book of Hardware Specialties.

UTICA DROP FORGE & TOOL CO.

Mfrs. of Nippers and Pliers.

ALLEN C. JENKING, Canadian Manager.

GLAZIERS' DIAMONDS



Ahead of all others in quality and workmanship. If sparkes of fine quality, set by experts, are what you require, buy Diamonds of A. Shaw & Son's make.

Canadian Agent

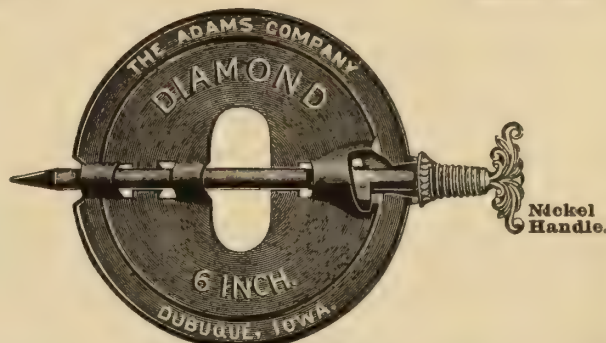
GODFREY S. PELTON

388 ST. PAUL ST., MONTREAL

DIAMOND STOVE PIPE DAMPER.

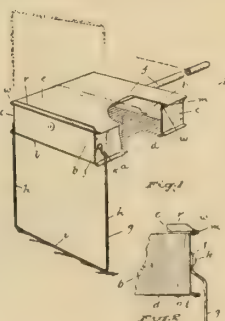
U.S. Patent June 25th, 1895

Canadian Patent December 14th 1893.



Made by

THE ADAMS COMPANY, Dubuque, Iowa, U.S.A. TAYLOR-FORBES CO., Limited, Guelph, Ont.



Pat. in Canada, May 17, '04.
U.S. Pat. allowed.

A Good 25c.
Ash Sifter

The only thoroughly good low-priced cylinder sifter made.

Sides are made of iron, making it neat and light; every wire in the bottom is folded in by our patent double-lock fold, making it impossible for a strand in the wire to become loose—will stay in place as long as the sifter lasts. Sifter can be hooked to fence or post, thus taking weight off operator, or can be operated in usual way. Covers provided (extra) to keep dust from rising; box is of galvanized iron. Is wonderfully effective, and beats the common wood and wire article all to pieces.

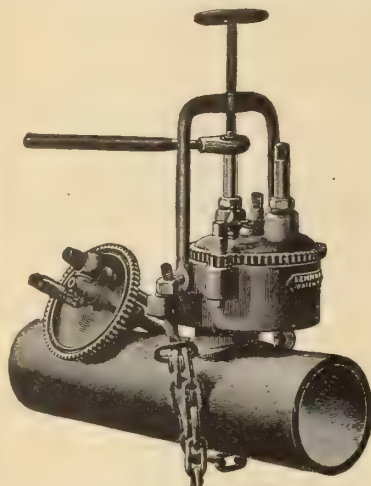
Can be Sold at 25 Cents and Pay a Good Profit.

Send for circular and price-list. Better still, send for sample dozen; they are as safe as wheat. Made only by

C. M. CUTTS & CO. 121 Dundas St. Toronto Junction, Ont.

LENNOX IMPROVED TAPPING MACHINE

FOR TAPPING WATER MAINS UNDER PRESSURE



Lennox
Special Dry
Tapping
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FOR TAPPING WATER
OR GAS MAINS

Thirty days free trial
to responsible parties.

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MANUFACTURED BY
LENNOX MACHINE CO.
MARSHALLTOWN, IOWA

Ranges and Stoves

We carry a complete line of Ranges, Cook and
Heating Stoves, and our goods are

Second to None.

We have on hand a few

Hot Water Heaters

AND

Gas Stoves

which we are

Selling at cost

as we are discontinuing the manufacture of this line.

CIRCULARS AND PRICES ON APPLICATION.

The New Burrell-Johnson
Iron Company,
Limited,
Yarmouth, N.S.

ONE YEAR IN BUSINESS!

SUCCESS.

More to follow.

Catchy designs for . . .

Catalogues, Pamphlets,
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PRICES LOW, : : QUALITY HIGH,
SERVICE QUICK.

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5 Jordan Street, Toronto.

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AND CANADIAN MACHINIST.

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NUMBER**

**HEATING
AND
PLUMBING**

THE MACLEAN PUBLISHING CO.
 Montreal, Toronto, Winnipeg.

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HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN,

Montreal.

The MacLean Publishing Co. Limited

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New Advertisements:

James Steele, Guelph.

BUILDING OPERATIONS IN WINNIPEG.

FEW people have any conception of the remarkable expansion in every line manifested in Winnipeg this year. The heavy immigration, from both the United States and Europe, has caused an acceleration of demand for all classes of products through Manitoba and the Northwest Territories. In Winnipeg the result has been a building boom utterly unprecedented in any city of the size in Canada.

For the six months ending June 30, the value of buildings for which permits have been taken out exceeded \$6,072,000, as compared with \$2,782,300 in the corresponding period the previous year. One realizes at once that this means exceptional building activity, but it is only when one considers that this amount is more than double the value of permits taken out in Montreal or Toronto, notwithstanding the great fire in the latter city, in the same six months, one is able to grasp the fact that in Winnipeg to-day there is an ex-

pansion quite out of proportion with the growth of trade or the increase in population in the older portions of the Dominion.

This building activity is of vital interest to all Canadian manufacturers, none of which, however, are likely to profit more from it than the manufacturers of plumbing and heating goods throughout the Dominion. In fact, it might well be said that the activity in Winnipeg and the west generally may be credited with having saved many Canadian manufacturers of heating goods from what seemed a few months ago to be an inevitable depression of trade this year.

NICKEL DEVELOPMENT.

IT is a well known fact that the largest deposits of nickel yet discovered or known to exist anywhere in the world, are in New Ontario, in the Sudbury District. The establishment of large refining plants at Sudbury and Copper Cliff, which are about to be effected, mark an important step in the nickel industry in this country. It means a further boom to the district so rich in promise, but as yet none too well known. It means the establishment of a new industry, the utilization of a large amount of water power and the further employment of Canadian labor. It means further and not of least importance that this wonderful country of New Ontario will naturally become better known, and when this takes place to a fuller degree it is bound to become an attractive place for the investment of foreign capital.

THE DUMPING CLAUSE.

FOLLOWING up our discussion of last week regarding the important legislation re "dumping" to be put in force by the Dominion Government, it must be apparent to our readers that special machinery for carrying out the provisions of the new enactment will have to be provided.

The basis of the legislation rests on the difference between the market price of any article in the country of production and the price at which it is being disposed of in Canada. Obviously, it

will be of the utmost importance that absolutely correct information regarding the former price be obtained.

It is understood that the Government are already beginning to train men, whose duty it will be to secure data for this purpose. These men will be required to visit different points in the United States and inquire into prevailing prices there, and it is understood a number of resident officials will be stationed at the principal markets of that country.

Naturally men of insight and shrewdness will be needed, men who are capable of conducting difficult investigations. For this purpose journalists are said to be far and away the best persons available.

On the other hand, men will be needed to study the Canadian side of the problem and watch the foreign goods coming into the country. Taken all and all, the system is a complex one and the result of its trial will be watched with keen interest.

A QUEER PROCEEDING.

A PETTY piece of protective policy has just received publicity, which places the Australian government in a miserable light. By a recent decision of the customs authorities in Australia, all trade catalogues, price lists, circulars, and trade journals, even when sent in single copies are to be detained by the customs and delivered only upon payment of duty. As might be readily expected, large numbers of these papers, etc., do not reach their destination or at least do not reach the people to whom they are sent, because the latter refuse, and quite reasonably too, to pay the duty.

An enterprising Australian business man has proposed that Canadian business men should send such trade matter to him and allow his firm to put them through the customs and distribute them. He forgets that the general inclination of the business men, while thanking him very kindly, would be to stop sending catalogues or papers to

that country. In Canada the conditions are sensible at least, for the customs allow two copies of all trade catalogues, price lists and circulars to enter the Dominion free of duty to any one address. Thus, there is no interference with any British or foreign house which may wish to introduce its goods by such means to the Canadian buyer.

In the present instance it will be not a little disgusting to many a merchant and big company to find that their catalogues, probably sent out in thousands, have not even been received by their prospective customers in Australia. Of what value can these catalogues be to any one? Then, too, the amount collected must be very trifling, and scarcely worthy of collection, unless a bankruptcy were threatened in the customs exchequer. However, one would fancy there was bankruptcy in farsightedness somewhere in that usually intelligent land, for are not these illustrated catalogues of great educational value, while trade journals are among the most important literature that is sent abroad? They, more than all other newspapers, keep the merchants and the manufacturers up to date.

COMMENDABLE ACTIVITY.

ALREADY the appointment of Mr. F. C. T. O'Hara to the post of superintendent of commercial agencies for the Dominion Government has been amply justified. Mr. O'Hara is brimful of ideas and, under his energetic management, new life will be breathed into the dry bones of the Department of Trade and Commerce. The result will undoubtedly be much to the advantage of Canadian trade.

One of Mr. O'Hara's first steps and one on which he must be complimented, was to request each commercial agent to send in information as to how to increase and maintain Canadian trade in their respective districts. Replies are now being received and these will appear in the Weekly Bulletin of the Department for July 25 or August 1. Business men can look forward to the pub-

lication of these reports with much interest, for the Canadian corps of commercial agents, though small, is intelligent and active and each agent's contribution will undoubtedly be right to the point.

In thus directing the work of the agents towards definite results and combining their labors towards the consummation of a united result, Mr. O'Hara is doing a work that has long been necessary and one which the business men of Canada will appreciate.

ADVANCES IN LINSEED OIL.

FOR some time there has been an upward movement in linseed oil in Great Britain. A few months ago prices on that market had receded to the lowest point in many years, if not to the lowest point on record. One result of this was to reduce prices on the Canadian market to a lower level than had prevailed for some time. The recent advance in British prices amounted to 2c per gal. This makes it possible to advance Canadian prices in proportion, but there does not seem to be a disposition on the part of Canadian houses to do so. An advance of 1c per gal. is reported by some of the leading houses, just previous to our going to press, while some houses have not yet made any advances.

TECHNICAL BOOKS.

HE who would be a success in any business or profession must be a student of his work. There are those who receive their instruction only from practical experience, and some who have followed this method have attained exceptional eminence and success. Yet it may be laid down as an axiom that the average man who supplements the lessons derived from practical work by the best reading of standard works on his chosen business will in ninety-five cases out of a hundred equip himself in a more thorough and useful manner, and will reach a higher point of success than would be possible were he to depend merely on what he could learn from what he saw or heard.

Those who have taken time from their business and given of their knowledge and experience to the world in the form of standard technical books have performed a service, frequently at a sacrifice, for which they deserve the thoughtful appreciation of all who read and benefit from their writings and drawings.

Until a few weeks ago there was no recognized medium in Canada through which those engaged in technical pursuits such as plumbing, contracting, furnace work, metal work, etc., could secure standard works devoted to their business. It was necessary in almost every case to import the books direct from the publishers. And, as the books had not been properly advertised in Canada, the craftsman found it quite difficult to keep in touch with the latest literature bearing on his work.

Hardware and Metal has, in recognition of this situation, made arrangements to handle some of the most reliable technical books published. We would invite attention to the reviews on one page and to the advertisements on another of this issue.

FOLLOW UP A SUGGESTION.

THE shrewd business man is ever on the alert for suggestions calculated to increase his knowledge and to enlarge his business. He should in equal degree be alive to the necessity of following up suggestions received. For instance, the reader of this issue of Hardware and Metal will receive many suggestions from the advertisements in this number. He should, therefore, follow up every such suggestion by writing for further particulars to the proper sources.

A PROPOSITION TO THE TRADE.

The Worthington Drug Co., Guelph, Ont., have a proposition for the hardware trade. They manufacture several lines of stock food which have been found good selling specialties by many hardware dealers, and they would like to correspond with any retailer who does not carry their line, and who would be willing to do so if the inducements were sufficient.

Progress in Plumbing Practice.

A Symposium on Plumbing Topics

IT is interesting to note the spirit of advancement and enterprise that has characterized the art of plumbing and heating within the last few years. Some of the prominent men in this line in Montreal have given their opinions regarding recent advancement. These may be considered as being representative of the trade in general.

Joseph Thibeault, president of the National Association of Master Plumbers gives his views on the subject as follows: "During the last five years there has been commendable change and advancement in the method of installing heating apparatus. The manufacturers of boilers have greatly improved their systems. The old style coils have been replaced by radiators handsome in appearance and easy to put in. The low down heating system is making progress, and is now adopted by large establishments.

"Plumbing in Montreal has undergone considerable change for the better, thanks to the action of the board of health in having pits removed from yards and having the plumbing of buildings inspected by a sanitary officer. We hope that in the near future stone sewer pipe will be replaced by cast iron pipe. Systems of ventilation have also been improved, which are a great safeguard to public health. The plumbing by-law has been amended which, in some points, will be very beneficial. Another point of progress is the fact that plumbers must now pass an examination before a board before they are allowed to practice the art.

"In reference to gas connections, it would be a great improvement if the city would have the gas company put a stop cock on the main service pipes for the safety of the working men."

JAMES BALLANTYNE.

James Ballantyne knew of no other trade in the building line that has improved as much in the same length of time as plumbing and heating.

"Ten years ago," said he, "enamelware was almost unknown, but now it is considered a very ordinary job that has not the most up-to-date enamelware plumbing fixtures and open work. Solid porcelain is fast gaining ground. It has been used considerably in the past and will be a great deal more in the future. Standard goods are fast being adopted for all classes of dwellings, adding greatly to the pleasure and comfort of living."

J. W. HUGHES.

J. W. Hughes gives the benefit of his experience along the same line as below:

"The annual meeting of the National Association of Master Plumbers of the Dominion marks another milestone on the highway of change and progress that has taken place in this important art. Men, methods and materials have changed completely several times within the memory of those still active in the business.

"The days when open wooden drains, uncemented tile pipe, pan closets and untrapped or non-ventilated fixtures filled the bill, are long passed. What we considered up-to-date and even high-class as regards fixtures ten years ago, is to-day scarcely up to the requirements of a dwelling of moderate cost.

"Heavy cast iron pipe has almost completely superseded pipe of lighter grades. While it is conceded that extra heavy cast iron pipe is first-class material as regards durability, the caulked joint is a source of weakness. Did wrought iron pipe possess the resisting qualities against corrosion of cast iron, a solution of this problem would be at hand. Untarred or asphalted pipe is now called for in all up-to-date plumbing by-laws.

"The introduction of a reliable flushing valve that permits of the installation of numbers of closets, supplied from one central cistern marks an important advance, as it simplifies the plumbing, making it more reliable, durable and less likely to call for repairs.

"Another great step in advance is the passing of by-laws in some of our large cities calling for examinations for plumbers, both masters and men. This cannot fail in time to raise the standard of the art to a very high degree.

"The steady progress that has been made is due to the efforts of both masters and men; and in a very large measure accomplished through the influence and working of their associations."

SENSIBLE LABOR EPIGRAMS.

The Chicago Chronicle is sending out envelopes containing neatly printed cards bearing epigrams on the labor situation. Following are quotations from some of the cards:

"The same law which gives one man the right to quit work gives another man the right to work."

"To quit work is one thing; to prevent other people from working is another thing.

No strike in Chicago contemplates merely the quitting of work. Its real purpose is to prevent anybody else from working."

"No union button gives a man a right to live and to work in peace. While this right is obscured at times, it exists and it is protected not by union buttons as big as butter plates, but by the constitution and the laws."

"Is that labor free which, on the one hand, must submit to assessments in order to secure work, and which, on the other, refusing to share with idlers its earnings, is hunted with guns and bludgeons like an outlaw?"

"Arbitrate? There is no question for arbitration where there is organized violence and lawlessness. There is no question at all. It is simply the duty of the proper officers to restore order and peace and obedience to law and authority."

"Is it not common sense that under American institutions the majority shall rule, and rule by the orderly machinery of established government? Is it not common sense that trade disputes shall not be suffered to annihilate the peace of an entire community and throttle the law?"

PERSONAL MENTION.

MR. Henry Clucas, Toronto manager of Canada Paint Co. has just returned from the St. Louis Exposition, where he spent 11 days. The Canada Paint Co. have an exhibit there. Mr. Clucas says that the Canadian exhibits there are a great credit to our country, some of them attracting special attention. Mr. Clucas leaves for Montreal on July 25 for a few days' stay.

Mr. J. N. Hunter, who has charge of the advertising department of Lewis Bros. & Co., Montreal, is enjoying his vacation in Dundas and other western Ontario points.

Mr. Leon Beauchamp of the Standard Construction Co., Montreal, was married on Tuesday, July 19, to Miss Annette Desjardins, daughter of the Hon. Alphonse Desjardins, of Maisonneuve.

Mr. H. W. Rosevear of N. J. Holden & Co., Montreal, left this week on an extended business visit to Winnipeg and other western points in the interests of his firm. Mr. Rosevear will probably spend a couple of months in the west.

**Who?
What?
Why?**

Ask these questions when you are solicited to buy a line of which you don't know too much.

Who are we?

We call ourselves The Colonial Stock Food Co. The man behind this business is a graduated chemist. He has travelled as a salesman all over the country. He has been a poultry fancier for many years. He began the making of Poultry Food in a private way. The remarkable success of this food suggested the seeking of a wider market, and from this was developed a Stock Food. Possibly many of you know W. J. Fielding, of the Colonial Stock Food Co.

What do we Sell?

We have answered this question already—Colonial Stock Food and Colonial Poultry Food.

Colonial Stock Food

is matchless for quality, strength, and health-giving properties. This has been proven times without number. Dealers who handle it find out from farmers and stockowners, and we have dealers' testimony in abundance. Also enthusiastic letters from users. Colonial Stock Food has replaced other widely-known foods in many instances.

Colonial Poultry Food

is a marvel. It does for fowl more than is expected. As an egg-producer it is guaranteed in the most positive manner. As a health-regulator it is superb.

The booklet we have prepared tells at greater length and most convincingly the merits of Colonial Stock and Poultry Foods.

Why should you sell Colonial Stock and Poultry Foods?

Granted that these foods are better than any others offered you, study these prices and calculate the profits.

ONE AGENT WANTED IN EVERY DISTRICT. WRITE US FOR AGENCY.

Prices on our Stock Food : 6-doz. 10c. pkgs. at .75 doz.
3 doz. 25c. " at 2.00
Holds almost 3 lbs.

2-doz. 50c. pkgs. at 4.00 doz.
Holds 6 lbs.
25-lb. Pails, - at 1.30 each.
Retails for 2.25

Prices on our Poultry Food :

Packed in 3 and 6-doz. cases; 1-lb. cartons
Retails at 25c per pkg. ; cost \$1.25 per doz.

FREIGHT PAID ON ORDERS OF \$50.00 AND OVER.

COLONIAL STOCK FOOD CO.,

**79-81 WILLIAM STREET,
TORONTO.**

DEAR SIR:

I have fed your Stock Tonic to cattle, and like it very much. It makes them thrive well and put on flesh more rapidly. I think it is the best tonic I have fed to Horses. We are also feeding it to our hens this winter, and they are laying better than they have done for a long time. It pays to feed it.

Yours truly,

JAMES LEASK,
Feeder Sweepstakes Fat Cattle
Provincial Winter Fair, 1901-23.

Greenbank P.O., Ont., Feb. 23, 1903.

DEAR SIR:

I find your Stock Food is a very excellent Tonic for cattle, giving them a good appetite and keeping their digestive organs in a healthy condition. The steer "Scottie," exhibited at Winter Fair, weighed, at birth, 80 lbs.; at 35 months, 2,000 lbs., making a gain of 55 lbs. per month. It pays to feed Worthington's Stock Food.

ANDREW RICHARDSON,
Breeder Shorthorn Cattle, Peepabun, Ont.

DEAR SIR:

Send me 3 doz. boxes of your Stock Food. I find it takes well and gives good satisfaction. I have no hesitation in recommending it.

Yours truly,

C. E. NOBLE,
Hardware Merchant.

Dundalk, Ont., Dec. 28, 1903.

DEAR SIR:

I wish you would send me some of your printed advertising matter. I am selling your Stock Food and getting good recommendations, and expect to send you another order soon. One customer says I will sell tons of it next winter.

Yours truly,

W. E. DAVEY,
Merchant

Orono, Ont., June 2, 1904.



Group of Prize-winning Fat Cattle, owned, and fed with Worthington's Stock Tonic, by Jas. Leask, Greenbank, Ont. Read what he says of Worthington's Stock Food.

WORTHINGTON'S STOCK FOOD outclasses all Stock Foods in quality apart from quantity and is undoubtedly the wonder of the age. The price is less than half of any other Stock Food. Put up in boxes retailing for 50c., 25-lb. pail \$1.50, 50-lb. pail \$2.75. Liberal prices to the trade on application. We are open to arrange exclusive agency for a hardware or other merchant in several Canadian towns.

WRITE AT ONCE FOR TERMS, ETC.

THE WORTHINGTON DRUG CO.

Agricultural Chemists,

Canadian Agents for
McDougall's Sheep Dip.

GUELPH, ONTARIO.

Stock Food in the Hardware Store.

IN the sweltering hot days of mid-summer the shrewd hardware merchant starts his preparations for his Winter's business. It is an ancient, yet wise as old, adage that one should "in time of peace prepare for war." So, when the Winter snows are still weeks in the future one should prepare for the demands which ever accompany the cold days.

Those hardwaremen who handle stoves have long since learned that in July or August they should start studying the respective merits of the various heating goods offered the trade, so as to decide in good time what lines to stock up.

The progressive hardwareman who has had some experience with stock food knows that at the same time of the year he should begin to study this line. There are many stock foods that he might handle. Some are good; some bad. He must take ample time to decide which he is going to offer his customers when the pastures fail.

There are, however, some hardware dealers who have not yet started to sell stock food. It is a noteworthy fact, it may be stated, that this class is becoming less and less numerous, as the trade become better acquainted with the line and learn its advantages as a hardware store line.

Some weeks ago, in reply to an inquiry, a Manitoba hardwareman pointed out that stock food had in his case proved to be an advantageous line to carry in several ways. One manufacturer supplied him with free samples, together with circulars inviting the farmers to call for them. One result of this had been that many persons who had never been in his store before came for the samples. In several of these cases the people came back with repeat orders. Another feature which this retailer considered of vital importance was that the manufacturer allows the trade a profit of materially larger margin than is allowed on regular hardware stock. This, combined with his being allowed the local agency for the line by the firm whose goods he bought, made the line an exceptionally good one to have in stock.

An Ontario hardware dealer, who last season carried the line for the first time, states that from either the viewpoint of the sales made or of the profits in the line he has been so satisfied with results that he intends going into the line more extensively.

The above statements are but two of several, all favorable, opinions which came to hand as a result of inquiries

made by a representative of Hardware and Metal. The unanimity of opinion, in fact, was such as to convince anyone that in the average case stock food is a line that the hardware merchant can handle to profit and to the building up of his connection with the farmers.

So, granting the advisability of stock food as a hardware line, what steps will the retailer take to make it of value to himself particularly—for unless he can get his share of the profits out of it he will see no advantage in stocking it.

As stated above, the matter is one that requires some study. Each of the stock food manufacturers have ready for the trade abundance of literature explaining the powers and purpose of the foods they would persuade the trade to handle.

Five cents, ten cents, or even a dollar spent in postage asking for such literature would be well spent if the retailer, when he secured the same, would give it his serious study and make use of the knowledge he may obtain from it. The retailer who can give a detailed and accurate exposition of the value of the stock food in his stock has an advantage in dealing with buyers of this line that is well worth the time and study necessary to obtaining the required knowledge.

Like breakfast foods for the household, this line is one that responds readily to advertising and window display. When the Fall days start to be cold and raw the retailer should not only have decided what brands he intends to handle, but should have the goods in his store, for then is the time to make a display of the line in his window and to do some good advertising about it.

How to Add a New Line.

IN an address on "Business Hints in the Hardware Line," C. T. Rosenthal gives the following suggestions re new lines:

To adopt new lines of goods requires a great deal of care, and local conditions should be well considered. It should be ascertained how many stores in town handle these goods, whether they have a good assortment of them or not, and the probable demands and profits. In deciding whether to put in a new line or not, the dealer's own judgment should be used. The salesman who wants to sell to the dealer looks at this question in a different view, and proper allowance should be made on

this score. It is easier to buy a new line of goods than to discard them should they be unsatisfactory.

Having, after proper investigation, decided to add a new line, quotations should be had from different houses. Not being otherwise posted, prices may be too high and undesirable goods may be bought if purchases are made from the first man that comes along.

A moderate stock of these goods should be bought, and quantities and assortments increased as demands of customers dictate.

WORKINGS OF THE DUMPING CLAUSE.

IN consequence of the dumping clause of the last tariff, customs officials in Canada are paying strict attention to the numerous cases in which practical application of the new law is necessary. During the last week or two, several consignments of goods have been received at the St. John custom house which have been seriously affected by the clause. The German and United States manufacturers have frequently been able to dump their surplus goods, especially steel products, in Canada at a price less than that at which the home manufacturer can supply the same article. Although in some cases the duty was raised years ago, which stopped the dumping business for a time, certain firms have lately started in afresh and have endeavored to secure that portion of Canadian trade, even at a great sacrifice of their own money.

The dumping clause of the tariff of 1904 states that the whole amount of the under-valuation must be added to the regular duty, except in the case where the difference between the domestic and slaughter prices exceeds fifteen per cent. Then the extra duty or surtax must not exceed fifteen per cent. Local manufacturers say that the present trade with the United States and German concerns cannot possibly go on under the new tariff.

With the exception of one or two cases it has not been applied to any very large shipments, which is probably due to the fact that orders which were placed before the Budget was brought down, will not be affected. The customs officials at St. John have, however, applied it in cases which have occurred very lately. The most serious one was in reference to a quantity of axes which had been ordered

since the 8th of June, the date when the Budget was brought down. As an example of how the tariff worked in this case, let it be supposed that there were six dozen axes, costing here \$4.50 per dozen, or \$27 for the lot. The domestic price was \$33, the duty on that being \$8.25. The difference between the two prices was \$6, which is more than 15 per cent.; therefore \$4.13, half of the regular duty, was added to the \$8.25, making the total duty on the consignment of axes \$12.38. The axes therefore cost \$39.38. This excessive duty makes the trade impossible. In the same way scythes and such like have been affected, and now the Can-

adians axe manufacturers are better protected. Now, if they sell these nails to Canadian dealers at \$1.70 per keg, which is a cut of 20c on the domestic price, the difference is added to the duty, making it 80c instead of 60c. Of course as already stated, whenever the reduction is more than 15 per cent. of the value, the extra duty does not exceed 15 per cent. In the case of material which formerly was sold here by the United States concerns for \$1 per hundred pounds, but which cost \$1.40 per hundred in the home market, the change in the tariff practically shuts that out, for the extra duty makes it impossible for the goods to be sold at a profit.

At Cleveland, Ohio, are situated two or three mills which supplied large

acquired the buildings on Queen and Peter Streets, formerly occupied by the Canada Elevator Co., and which adjoin their own wire mill and heavy weaving-shop. This is being rapidly converted into a fine wire drawing shop and an additional plant is being erected on the ground between the old mill and the newly acquired buildings which will be utilized as an annealing-room with the galvanizing and tinning plant beyond. This was rendered necessary largely by the increase in the sale of screen cloth in the last two years.

The works now present a large block. The buildings alone occupy nearly two acres of ground and the entire property



The Works of The B. Greening Wire Co.

adian axe manufacturers are better protected.

A quantity of earthenware consigned to a local plumber was also seriously affected by the extra duty. This line of goods is probably affected more than any other.

As before reported, the dumping clause was applied to a number of sewing machines with the result that out of the four dollars' reduction the purchaser got only seventy cents, while the rest went to the Government.

As regards pig iron, wire nails, etc., no application of the surtax has yet been made in St. John, but it is not thought the slaughter price on such material can continue. For instance, at the present time United States manufacturers are selling wire nails of the smallest size for \$1.90 per keg. The regular duty is 60c a hundred

quantities of steel rods, etc., to Canadian dealers at a very low cost, owing to the small freight they had to pay, it being in some cases not more than 50c a ton, which was due to the fact that they were so near the border and can ship across Lake Erie at a comparatively small expense. Such competition as this the home manufacturers were finding impossible to offset.—St. John, John, N. B., Sun.

THE GREENING WORKS ENLARGED.

IN making a periodical visit to Hamilton last week "Hardware and Metal" was very agreeably surprised to find the extensive additions that the B. Greening Wire Co., Limited, are making to their plant. The firm have

of the wire mills, something like 2 1-2 acres.

The numerous lines that are manufactured by the firm are so well known to the trade that it is scarcely worth while enumerating them, but the hardware merchant wanting anything in the way of wire or anything made from wire is always pretty safe in applying to the B. Greening Wire Co., Limited, for it.

The firm also carry a full stock of everything at No. 422 St. Paul St., Montreal, Que., as a convenience for their eastern customers, where all correspondence relating to business east of Kingston should be addressed to J. H. Hanson, who is in charge of that territory.



GREENING'S

IMPROVED

CATTLE CHAINS

RECEIVED

Strongest and Best on the market.

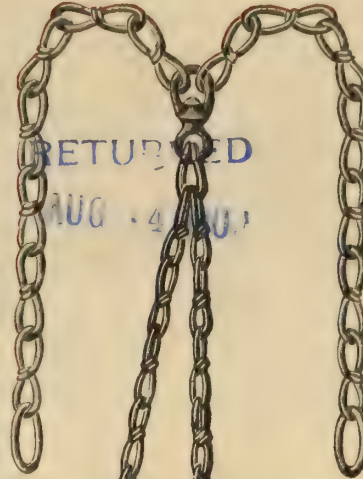
AUG 1904

Have stood the test for years.

Open Ring. Made in Six Sizes.



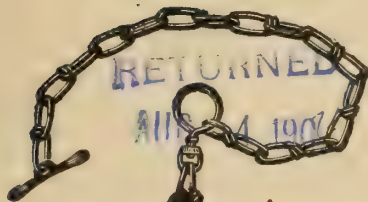
Four Chain
Cow Tie



Small Close Ring. Made in Six Sizes.



RETURNED
AUG 4 1904
Cut back 22
Page 15
ms



Walton or Three Chain. Made in Six Sizes.

THE STRENGTH of a Tie is that of its weakest part. Ours are of uniform strength throughout. It will pay to handle only the best.

Our Ties are numbered from 1 to 5/0, and may be described as follows: No. 1, Calf Tie; No. 0, Light Cow Tie; No. 2/0, Cow Tie; No. 3/0, Stock Cattle Tie; No. 4/0, Light Bull Tie; No. 5/0, Extra Heavy Bull Tie.

A complete line of all sizes ready for shipment.

Manufactured under Patent No. 50925.

FOR SALE BY ALL JOBBERS.

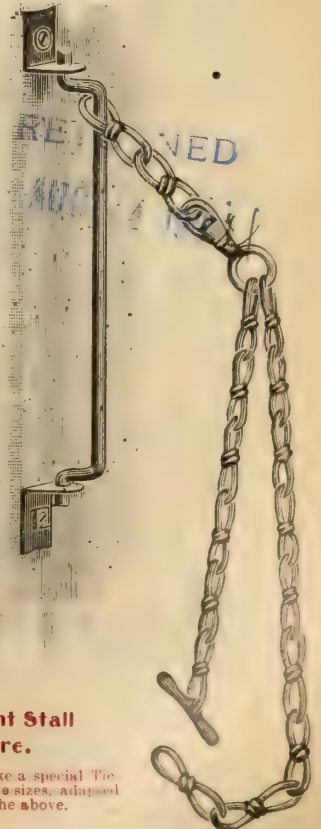
A good stock of CINDER SIFTERS, FRUIT DRYING CLOTH and small MESH NETTING in stock.

THE...

B. GREENING WIRE CO.

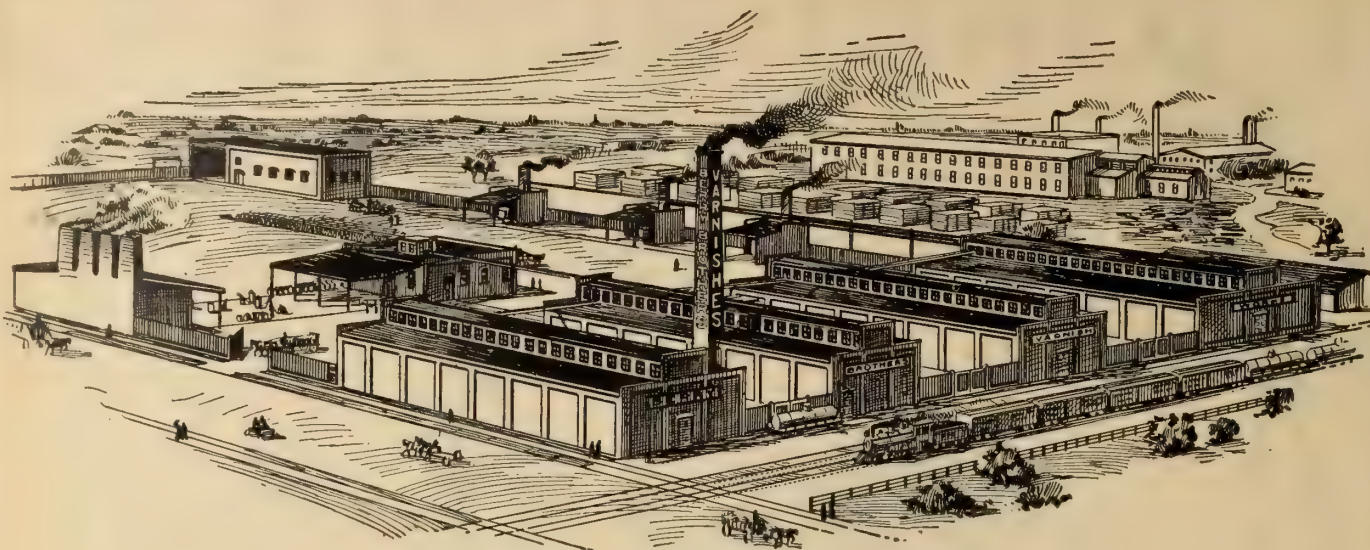
Limited

HAMILTON AND MONTREAL



Patent Stall
Fixture.

We make a special Tie in five sizes, adapted for the above.



IT IS NEARLY
HALF A CENTURY

since we commenced to make Varnish. During this period we have acquired a knowledge not only of Varnish, but of the varied needs of varnish consumers that nothing but time can impart, and have also learned how to cater successfully to every varnish want.

Our experience belongs to those who use and sell Berry Brothers' Varnishes.

Safest goods to handle, surest and most reliable goods to use.

WRITE FOR CATALOGUE.

Berry Brothers
LIMITED

WALKERVILLE, ONT.



PAINT, OIL AND BRUSH TRADES

Two Methods of Making White Lead.

WHITE lead or carbonate of lead is made from the metal by two methods, the second of which is merely a development of the first, says a writer in a popular weekly. The first or old Dutch method is still widely used, and has been the way of manufacture, perhaps, since the Roman times, and the Dutch, centuries ago, learned it from the Venetians. The metallic lead is cast into the form of stars, gratings, or thin perforated sheets, in such a way as render quite easy its conversion into the carbonate. These pieces of lead are placed in small earthenware jars, resembling flower-pots, about six inches deep, and wider at the top than at the bottom. A piece of wood is placed in the pot so as to confine the lead to the upper portion thereof. Some acetic acid (vinegar) is then poured into the bottom of the vessel, the lead placed in the upper part, occupying about two-thirds of the jar, and kept from the vinegar by the wood, and a slab of lead is placed on top. These jars are then arranged in parallel rows, forming a square tier of about 20 feet each way, or 400 altogether, and the whole covered with spent tan bark or stable litter. Another tier is placed on the top of the first and treated likewise. This process is repeated until there is a pile eight or ten tiers high formed, all embedded in the litter.

Left to themselves for six or eight weeks, the fermentation of the litter keeps up a suitable temperature and a constant supply of carbonic acid. The vinegar in the jars is converted into gas by the heat, and this aided by the imprisoned air, attacks the lead which becomes thickly coated with a white substance (basic acetate.) The carbonic acid given off from the hotbed in turn converts this basic acetate into the carbonate or white lead.

During the whole of the six or eight weeks this constant action and reaction continues until the whole of the metallic lead is changed into the white lead. After this is completed the pots are emptied and the newly made carbonate of lead broken up and ground in water to a fine paste. It is then placed in little conical moulds and allowed to dry. It is then ready for use, and is what is called dry white lead,

Some years since this was an extensive industry in Holland, and numerous factories had their existence around Rotterdam. But of later years white lead manufacturing is being conducted extensively in Prussia, Great Britain and the United States, causing the Dutch industry to dwindle down to smaller proportions.

In Saxony and Prussia, and also in Great Britain and the United States, the second method, which is merely a development of the first, is followed. The factory is a two-story building, the ground floor of which is occupied by a furnace. The floor of the upper chamber is composed of boards loosely arranged, so that the heat may readily pass through from the furnace beneath. Square or rectangular water-tight boxes, with numerous openings on top, are placed on the first floor. Above these are erected frameworks reaching to the roof to which short sticks are

attached in such a way as to enable them to sustain the bars or thin sheets of lead above the boxes. Some unfermented grape or raisin juice or cider is placed in the boxes, and this is made to ferment by the action of the heat from the furnace. The fumes from the grape juice together with the oxygen in the air decompose the lead, changing it to the carbonate. This falls in flakes to the floor where it can be gathered by the workmen, broken into fine particles, ground in water and dried in the moulds. It is then ready for shipment.

Cheap Linseed Oil.

Attention is directed to the advertisement in another column of cheap English linseed oil. English prices are advancing at present, and it is only by chance that the vendor is able to offer the oil at the very low price quoted.

Refined Gas Tar,
Coal Tar,
Roofing and Paving
Pitch.



Lowest Prices.

The Imperial Varnish & Color Co.

LIMITED,

TORONTO, ONTARIO, CANADA.

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street, Montreal.
Montreal, July 21, 1904.

WHATEVER may be the condition of the other markets due to the holiday season and the hot weather, the paint and oil market continues brisk and active.

The paint and oil market continues steady with a local weakening tendency. Turpentine continues steady, an advance of 10c a gallon being noted this week. The demand for Paris green is only fair but white lead is particularly active.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

Putty—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 82 1-2c per gallon; two to four barrels, 81 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

Linseed Oil—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in whole-sale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c; 25 lb. drums, 15 1-4c; 1 lb. packages, 16c; 1-2 lb. packages, 18c; 1 lb. tins, 17c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, July 22, 1904

THE demand for mixed paints, varnishes and dry colors has been very good this week. White lead is very active. The outlook for these lines is exceptionally good at present, being the best seen in years. Paris green is selling well. There has been a steady advance in linseed oil in Britain during the past week, and although as yet no changes in local quotations have been made, the

market is very firm and prices are likely to be higher. Contrary to expectations, turpentine has advanced slightly at points of production, but it is not expected that this will affect local quotations. During the past week there has been a better demand in all lines than is usual at this time of the year. There is no change in quotations of any lines.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls., 46c; boiled, 49c; 5 to 9 bbls., raw, 45c; boiled, 48c, Toronto, Hamilton, London, Elora and Guelph,



"Anchor" is the Brand

Behind which we stand

In Liquid House Paints, as well as other lines of our manufacture, "Anchor Brand" means the "Best Brand" on the market. The White Lead used in Anchor Liquid Paints is BRANDRAM'S B. B. GENUINE, the world's standard for 186 years.



HENDERSON & POTTS, Limited, Mfrs., Halifax
HENDERSON & POTTS CO., Ltd., Mfrs., Montreal

If You Buy

Varnishes	Paints
Japans	Colors
Lacquers	Glues
Stains	Bronzes
Fillers	Chamois
	Sponges

WRITE TO

R. C. JAMIESON & CO.

LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.



GILLETT'S LYE

—IS GOOD FOR—

Family Soap Making

Simply requires to be dissolved and mixed with melted tallow or grease.

It is cheaper to make soap than to buy it.

Sell Gillett's Lye for

Soap Making

E. W. GILLETT COMPANY LIMITED

TORONTO



Catalogue and Prices on Application.

The Hardware Man's Friend

The dealer's truest friend is the firm that supplies goods that can not only be relied upon to give satisfaction, but will assure a return of the customer to duplicate his order. This is exactly what

BOECKH'S AND BRYAN'S BRUSHES AND BROOMS

do. They are unquestionably the best because there is put into their construction the best material and the best skill that money can buy. No trouble or expense is spared to make them **THE VERY BEST.**

UNITED FACTORIES, Limited

Head Office: TORONTO

OPERATING:

Boeckh's Toronto Factories.
Bryan's London Factories.
Cano's Newmarket Factories.

MONTREAL BRANCH: 1 and 3 DeBresoles St.
LONDON BRANCH: 71 Dundas St.

**BRIDGE PAINT
GIRDER**

ONLY THE BEST MATERIALS

THE CANADA PAINT CO. LTD.
MONTREAL AND TORONTO.

**BRIDGE PAINT
GIRDER**

ONLY THE BEST MATERIALS

THE CANADA PAINT CO. LTD.
MONTREAL AND TORONTO.

net 30 days. Advance of 2c for delivery to outside points. Another quotation is: Raw, 1 to 4 bbls., 46c; boiled, 49c; 5 to 9 bbls., 45c; boiled, 48c; 10 barrels and over open, ex-Toronto, 2 per cent. off 30 days.

Turpentine—Single bbls., 81c; 2 to 4 bbls., 80c; 5 bbls. and over, f.o.b. point of shipment, net 30 days. Another quotation is: Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

English Paris Green—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

Window Glass.

MONTREAL.

Window glass has evidenced a change during the past week. Prices have been reduced 10c on 50 feet, and 25c to 50c on 100 feet. This reduction is due to the changes made in the tariff recently. The selling prices now are: First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70; seventh do., \$5.20, and eighth do., \$5.70. The discount on 50 feet is 20 per cent, and on 100 feet 33 1-3 per cent. There

has been no change in prices for diamond star or double thick. First break, 50 feet, \$2.30; second do., \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

TORONTO.

The trade in this line is very fair. Much cutting in prices is reported, but prices remain normally at last week's quotations.

We quote nominally as follows: Star, first break, at \$3.80 per 100 feet, and Double Diamond, first break, at \$5.06. Discount, 15 and 20 per cent.

Woodenware for the Trade.

THE Berlin Woodenware Co., Berlin, Ont., are manufacturers of extension ladders made of selected Norway pine, spruce, Douglas fir, and Georgia pine. Each side rail has a heavy, high carbon steel wire stretched along the inside immediately under the rungs, and securely fastened to the bottom end. At the top end the wire is attached to a steel bolt and nut, with a thread of 2½ inches, so in case the wire should stretch it can easily be tightened up to its proper tension, thus taking the strain off the side rail and forming a truss; and also prevents warping and side swaying entirely, a common defect in all other makes of ladders. Other lines, such as step-ladders, ash sifters, rocking horses, washing machines, hammock supports, lawn settees and clothes reels are offered to the trade by this firm. Write them for particulars.

MONTREAL ROLLING MILLS' PRICE LIST.

Hardware and Metal has received from the Montreal Rolling Mills Co. a copy of their new price list for 1904. The book is handsomely bound and is in fact a triumph of the publishers' art. The price lists and descriptions of goods are complete, and the book should be invaluable for reference by the hardware merchant. Readers of Hardware and Metal will be supplied with copies on request.



Bath Tub Enamel

Users of this line will find our Enamel unequalled in every desirable quality. It effectually resists hot and cold water, and provides a surface on which unclean and unsanitary accumulations of grease, soap, sediment, etc., have no action. Withal it is economical. Made in Pure White, Ivory, Blue Tint, Flesh Tint and Sea Green. Send for quotations. Special discounts on large orders.

STANDARD PAINT & VARNISH CO., LIMITED, : WINDSOR, ONT.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street.

A trial order will prove to you that there is nothing better than

SOLARINE Metal Polish

Sells wherever introduced.
Only try it and convince yourself.
For Ontario, address:

HENRY F. FALKINER, 60 George St., Toronto

Linseed Oil

To-day's price in London is £18 1s od. I offer 50 barrels, raw, at £17 15s od, c.i.f. Montreal, which price with duty is less than 41c. per gallon. Also 50 barrels refined at £19 5s od, c.i.f. Montreal.

J. W. L.,

P.O. Box 1157,
Montreal.

McCaskill, Dougall & Co.

Manufacturers



RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES

MONTREAL.

GLUES AGAIN

Our IMITATION FRENCH MEDAL GLUES are of such high class

and are so suitable for Export that we would like to quote you. Export trade in this line is growing rapidly, and we pack in casks or cases as preferred. Quality unrivalled.

GROVE CHEMICAL CO., LTD., Appley Bridge, Lancashire, Eng.

TRADE



MARK

Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works or from the principal Color Dealers in Canada



This "Island City" Trade Mark

Stands for a uniform quality of Mixed Paints which you can always recommend with confidence. Yet we don't charge you a fancy price for the trade mark--we charge you only for the paint.

P. D. DODS & CO., Montreal, Toronto, Vancouver

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, July 21, 1904.

Hardware.

VARIOUS as are the conditions at present exercising a backward influence on the hardware market trade seems to keep up wonderfully. This week and the few following are generally considered the duller season of the year. Holidays have set in and the majority of travelers are storing up latent energy by the side of a stream or lake. The excessive heat is not without its demoralizing effect. In spite of these facts there is an active business being done. Sorting orders are coming in well and considerable stock is moving.

Prices on the whole are the same and there is an evenness that is quite noticeable. Loaded cartridges have advanced in price and Savage rifles have been lowered slightly. Otherwise there is no change.

Agricultural Wrenches—Business is first class. The advance noted two weeks ago still holds. We quote: 6 in., \$2.85 a dozen; 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

Wooden Handles—A fairly good trade in these, although hardly as good as formerly. We quote maple and hickory handles of all kinds, discount 45 per cent.; ash hayfork handles, manure, spade and shovel handles and adze handles, discount 40 per cent.

Hay and Grain Scythes—Considerably lessened demand this week. Hardly any hay scythes being ordered.

Grass Hooks—Merely a moderate demand as the season for grass hooks is pretty well over.

Scythe Stones—An active market with no change in prices.

Wood Hay Rakes—Still a few selling at the advance noted recently. We give these quotations: Wood bow, straight, No. 1, \$3.40 a dozen; No. 2, \$3.10 a dozen; bent, No. 1, \$3.60 a dozen, list price. Discount, 40 per cent.

Lawn Mowers—Although the season for lawn mowers is well advanced there is a fairly good business being done.

We give the following quotations: With 8 inch wheel, sizes 12, 14 and 16 inch, \$2.65 each; with 9 inch wheel, size 12, \$3; size 14, \$3.12 1-2; size 16, \$3.25 each; Philadelphia pattern, size 12, \$3.25; size 14, \$3.50; size 16, \$3.75 each; High Wheel, size 12, \$4; 14, \$4.25; 16, \$4.50; 18, \$4.75; 20, \$5.25 each.

Ice Cream Freezers—A brisk business continues, the hot weather no doubt exerting a strong influence. We quote following range of prices for the leading brands: One quart, \$1.50 to \$1.60 each; 2 quart, \$1.70 to \$1.80 each; 3 quart, \$1.95 to \$2.25 each; 4 quart, \$2.35 to \$2.60 each; 6 quart, \$2.95 to \$3.25 each; 8 quart, \$3.70 to \$4.10 each; 10 quart, \$4.75 to \$5.50 each; 12 quart, \$5.75 to \$6.50 each; 14 quart, \$6.75 to \$7.50 each.

Washing Machines—There were a few orders received, but market is not at all brisk. We quote as follows: Round (three legs), \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Harvest Tools—Little business is now being done in this line. Discounts as before, 60 per cent.

Spring Hinges—Demand is considerably slacker than usual, the volume of business being pretty well over for this year. We quote: No. 5, \$17.25 per gross; No. 19, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—Goods are moving slowly at present. Sizes 12 inches and upwards are selling at \$2.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Wire Coat and Hat Hooks—A brisk demand. Prices continue 75c a gross for 3 inch.

Churns—Few churns are being ordered just now. Discounts 40 and 15 per cent., f. o. b., Montreal and 30 and 10 per cent. f. o. b. factory.

Green Wire Cloth—Still moving fairly well, but hardly as great a volume of

business is being done. Price \$1 per 100 sq. ft.

Poultry Netting—Hardly as brisk this week. Discounts for 2 inch 19 gauge standard extras are 60 and 5; for 2 inch 16 gauge the discounts are 55 and 5 per cent.

Annealed Hay Wire—A very brisk demand continues. Prices and discounts the same.

Galvanized Poultry Netting Staples—Merely a moderate business being done. Prices are: Sizes 5-8, 3-4, 11-8, 10 lb. boxes \$12.50 list; 25 and 50 lb. boxes, \$12.25 list; 100 lb. boxes, \$12 list. Less 57 1-2 per cent.

Fence Staples—Fence staples are in good demand. We quote: \$3 per 100 lb. keg for galvanized and \$2.80 for bright; 25 to 50 lb. packages, 25c extra.

Barb Wire—There is a splendid business being done in barb wire this week. Prices continue the same. We quote: \$2.75 per 100 lb. f. o. b. Montreal, and \$2.50 f. o. b. Cleveland. Car lots of 15 tons, \$2.40 f. o. b. Cleveland.

Galvanized Wire—Moving fairly well. We give the following quotations No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In car lots f. o. b. Cleveland, No 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than car lots 12 1-2c extra per 100 lbs. will be charged.

Rivets and Burrs—These are in fair demand which continues steady. Discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

Screws—There is no shortage this week and the demand continues good. Discounts are as follows. Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round

head, 75 per cent.; brass, flat head, 80 per cent.

Bolts and Nuts—Business is quite brisk in bolts and nuts this week. We quote discounts as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Cut Nails—Large shipments are being made this week. Prices steady. We quote as before, \$2.30 per keg f.o.b. Montreal, Hamilton, Toronto and St. John.

Wire Nails—Briskness continues to be a characteristic of this market. We quote the following prices: \$2.40 per keg car lots, and \$2.45 per keg in small lots f. o. b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Pressed Spikes—A good business being done. Discount as before 25 per cent.

Horseshoes—An average demand with no marked changes. We quote: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—As is the case with horse-shoes, an average business is being done. No changes in prices. We quote as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list; other brands, 55 per cent. off list.

Shotguns and Rifles—It was noted last week that fall business had commenced. The business outlook is good. Savage rifles have been lowered slightly. New discount 15 per cent instead of 12 1-2 as formerly.

Ammunition—Business is commencing with a healthy tone. American loaded shells have advanced; the former discount was 30 per cent. It is now 17 1-2. We quote: Rim fire cartridges, 30 and 2 1-2 discount from list; centre fire, 5 per cent. advance on list.

Roofing Pitch—Demand still continues good. Prices as before, \$1 a cwt.

Building Paper—A brisk and active business is noted in building paper this week. We quote: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Fire Brick—There is very little business being done at present.

Cement—The cement business shows no tendency to recover from the depression that exists in that line. Prices remain unchanged at former quotations, which are: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex cars.

Cordage—The cordage manufacturers report that while business is by no means brisk there is a fair, average trade being done. Last week's quotations of double lath yarn at 10c should have been 10 1-2 and a typographical error made sisal 10, instead of 11. Quotations are as follows: British pure manila, 11 1-2c; pure manila, 14 1-2c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

METALS.

A comparative quietness exists in the metal market this week. Pig iron particularly is quiet and scarcely any business in that line is reported. There is a fair amount of import business in galvanized iron at quoted prices. Sheet zinc and zinc spelter have advanced in price. Copper and tin continue firm and fairly active. Pig lead is slightly firmer with a good demand. There is no change in scrap metals, in which line business is dull.

Pig Iron—The market continues dull with no tendency towards brightening. An increase in price is noted in Summerlee from \$18.50 to \$18.75, delivered in Montreal. Otherwise conditions are about the same. Prices are:

"Disc," No. 1.....	\$17.50 delivered Montreal.
"Dom.," No. 1.....	18.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.75 " "
Glengarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carabroe.....	18.50 " "
Carron No. 1.....	19.00 " "
" (special).....	17.50 " "
Ayresome No. 1.....	17.50 " "
" No. 3.....	16.00 " "
Clarence No. 1.....	16.25 " "
" No. 3.....	16.00 " "

Bar Iron—A strong market and an active demand are features this week. Prices continue: Merchants' bar, \$1.75; horseshoe iron, \$2; forged iron, \$1.95.

Merchant Steel—Hardly as active as usual. Prices as before. We quote: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.35; machinery (iron finish), \$2; square harrow, \$2.45.

Tool Steel—Business fair. A change in quotation of Sanderson's this week covering a wider range of quality. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

Black Sheets—Moving at a moderate rate. We quote as follows: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Canada Plates—The quotations given are subject to concessions. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized, \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Galvanized Iron—There is a fair amount of import business being done at steady prices. No new quotations are reported. Prices are quoted as follows: Queen's Head, 28 gauge, \$4.30; 26 gauge, \$4.05; 22 to 24 gauge, \$3.80; 16 to 20 gauge, \$3.70; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28 gauge, \$4.30. "Windmill Best," 28 gauge, \$4. In less than case lots, 25c extra.

Sheet Zinc—Market is firmer. Prices have advanced 12 1-2c a cwt. during the week. Cask lots are selling at \$6.37 1-2 to \$6.62 1-2. Small quantities \$6.62 1-2 to \$6.87 1-2.

Zinc Spelter—A slight advance also noted. Market is firm at from 6c to 6 1-4c.

Tin Plates—These continue the same Cokes, \$3.75 and charcoal, \$4.

Ingot Tin—There is a stronger feeling this week. Last week's quotations hold

and concessions are still obtainable. Quotations are 30 to 30 1-2.

Ingot Copper—Copper is slightly more active this week and is firmly held at 13 1-2c.

Pig Lead—Slightly firmer and more active. Quoted at \$3.25 to \$3.35.

Coil Chain—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on carlots.

Scrap Metals—No change in price has taken place in these lines this week. Business continues dull. We quote as follows: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,
10 Front Street East,

Toronto, July 22, 1904.

This being the commencement of the holiday season, business is beginning to slacken up as is usual. However, the slackening is not so noticeable as in former years. The season is now about over for lawn mowers, screen doors, screen wire cloth and spring hinges. There are, however, a few shipments yet being made to fill orders already booked. Business in galvanized wire and coiled spring wire is also beginning to slacken. There are still a few orders being placed. There has been a drop of 1-2c in pure manila cordage and also in sisal. Cotton twine, 3 ply, is 1c lower, as is also 4 ply. The demand for cement this week is a trifle more brisk. Business in building paper has fallen off slightly. In general hardware the market is reported to be somewhat unsteady because of close competition.

Harvest Tools—There is a steady demand, although the volume of business is not up to what it was two or three weeks ago.

Sporting Goods—Retailers are beginning to stock for the Fall trade now, and business is making a steady increase. For the beginning of the season there is decidedly a good demand this week.

Washing Machines—The demand for this line of goods is decidedly good this

week. Prices are as follows: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Woodenware—There is a fair trade doing. Prices are now as follows: Tubs, No. 0, \$11.55; No. 1, \$9.35; No. 2, \$8.25; No. 3, \$7.15; pails No. 1, 2 hoops, \$1.93; 3 hoops, \$2; clothes pins, 5 gross cases (full count), 60c; 6 dozen packages (12 to case), 95c.

Steel Track Door Hangers—The situation as reported last issue still holds. As a consequence of the concessions offered there has been more business done in this line than usual.

Chain—There is a very fair demand for this line. Prices as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Lawn Mowers—There are a few orders being filled and shipped, but business in this line is practically over for this season. Prices are unchanged, as follows: Woodyatt, 10 1-2 inch wheel, \$8.50; Star, 9 inch, \$7; Daisy, 8 inch, \$5.75; Philadelphia, 7 1-2 inch, \$7; Ontario, 7 1-2 inch, \$15.80; King Edward, 12 inch, \$9.50 (14 inch cut in above). D. Maxwell & Sons, 10 1-2 inch, \$7.50 to \$10; 9 inch, \$5.50 to \$6.25; 8 inch, \$4.90 to \$5.50. Discount 50 per cent.

Screen Doors—Practically no orders are coming in now, although there are a few shipments still being made to fill orders before received. We quote: Common, two or three panel, walnut, 4 inch, \$6.50; yellow and green stained, \$6.75; in natural colors oil finish, \$8.75, with 20c less for 3-inch style.

Screen Wire Cloth—Business in this line is about over for the season, although there are a few shipments being made. Prices are steady at \$1.50 per 100 ft.

Spring Hinges—The season for this line is practically over. There are still a few orders being filled, however. Prices steady, as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Barb Wire—A very fair trade continues. Prices are steady. We quote as follows: \$2.75 per 100 lbs. f.o.b. To-

ronto and \$2.50 f.o.b. Cleveland. Carlots of 15 tons, \$2.40 f.o.b. Cleveland.

Galvanized Wire—A fair trade continues at unchanged prices. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs. extra charged.

Coiled Spring Wire—Sorting orders are coming in from day to day. Prices are steady. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—Business is good this week. Prices are steady. Quotations are \$2.45 per keg f. o. b. Toronto, with carlots \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f. o. b. Toronto and Hamilton.

Horseshoes—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business is very fair in this line. Prices remain unchanged. We still quote as follows: "C" brand, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—A steady active demand continues. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—Business keeps brisk in all sizes, at steady prices. We quote as follows: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—A very fair demand is reported by all dealers. Prices are steady. We now quote: Carriage bolts, common (\$1 list), 3-8 diameter and

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FIRE BRICKS, FIRE CLAY,
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smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Cordage—There is an active demand reported. British pure manila and sisal have declined 1-2c, and cotton twine, both 3 and 4 ply has dropped 1c. Otherwise prices remain unchanged. We quote Sisal, 10 1-4c; standard, 10 1-4c; standard manila (550 ft.), 11 1-4c; manila (600 ft.), 12 1-4c; pure manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are as follows: Pure manila, 14 1-2c; British pure manila, 11 1-2; sisal, 11 double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sash cord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 24c; 4 ply, 29c; ealcing cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Building Paper—There is at present a brisk demand for roofing paper. The demand for building paper is not quite so good. Trade is brisk and prices are uncharged. We quote: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

Firebrick—The demand this week still continues to be good for firebrick. Prices are unchanged. We quote the following: English and Scotch firebrick 30 to 35c American, low grade, 22 to 27c; High grade, 32 1-2 to 40c.

Cement—The trade still continues to be good in the cement market this week, the demand being a trifle better. Prices are unchanged with the exception of Canadian Portland which has declined 10c to 15c. Our quotations are as follows: Canadian Portland, \$1.80 to \$2.10; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2, ex-store; American

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and other Metals.

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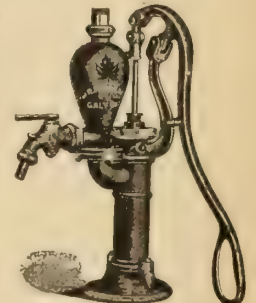
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METALS.

The improvement in the tone of the metal market noted last week still keeps up. Indeed the tone is decidedly stronger than for several weeks past. There is never a large buying movement at this season, but it is somewhat better this week than is usual. The outlook for Fall trade is very bright. There has been a sharp advance in tin on outside markets, and local quotations have advanced 1c. The outside markets for copper are firm and the local market is active. There is a stronger demand for zinc spelter than last week.

Pig Iron—Prices in Canada are steady at the present time. As was noted last issue, the improved tone of the American market has probably had something to do with the firm steady market here. Quotations are now unchanged, as below:

Middlesboro, f.o.b., Toronto	\$18 75
Hamilton, No. 1	\$17 50 to 16 75
" No. 2	17 00 to 17 25
" No. 1, Hamilton	16 25 to 16 50
Midland, No. 1	17 50 to 17 75
" No. 2	17 00 to 17 25
" No. 1 f.o.b. Midland	16 00 to 15 50
Radnor, f.o.b. furnaces	27 00
Londonderry, f.o.b. furnaces	16 50 to 17 00

Bar Iron—A good business is being done, and prices are firmly maintained. We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—A very good demand is reported, and prices are steady. Quotations as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—In outside markets there has been a sharp advance, and the local market has advanced in unison. The advance is 1c. We quote altered prices from 30 to 31c.

Galvanized Sheets—There is a very sound demand. Margin is very close. Quotations are as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

NICHOLSON FILES

Are known all over the World.

WARRANTED.

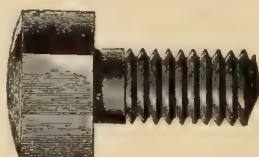
QUICK CUTTING. LONG WEARING.

SIX FACTORIES PRODUCING DAILY 120,000.

Sold by all prominent merchants throughout the Dominion.

PRICES RIGHT.

DOMINION WORKS, Port Hope, Ont.



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs, Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.

DO IT NOW

MANUFACTURERS WISHING TO BE REPRESENTED IN

MANITOBA

COMMUNICATE WITH

DAVID PHILIP, Manufacturers' Agent

References Furnished.

470 Main St., Baker Block, WINNIPEG, MAN.

Tin Plates—There is a very good demand, with prices unchanged. Stocks are light. We quote the following: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—An improved demand is reported. Prices remain steady. We quote as below: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Copper—Market is active this week; outside markets are firm. Prices are unchanged, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

Brass—Conditions are unchanged. There is a fair demand, with discount steady at 15 per cent.

Lead—There is a good demand with prices very firm. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—There is a stronger demand. Buying is active at 5 3-4 to 6c per lb.

Solder—There is a fair trade. Prices are 1-2c lower. We quote: Guaranteed

half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Antimony—Market is quiet. Quotations are: 7 1-2 to 8c per lb.

Old Material—Business still continues about the same in this market. Prices, owing to the orders received by the mills, are a little stronger, but no material change has taken place. We quote: Heavy copper and wire, 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 9 1-4c per lb.; heavy yellow brass, 7 1-2 to 8 1-2c per lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.45 per cwt.; scrap zinc, 2 1-2c per lb.; iron, No. 1 wrought, \$8 to \$9; No. 2 wrought, \$2; machinery cast scrap, \$12; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 4 to 4 1-2c per lb.; country mixed rags, 70c per 100 lbs.

Petroleum—Trade still continues to be good, with prices unchanged. Our quotations are: Canadian water white, 18c; Canadian prime white, 16 1-2c; American water white, 19c, ex-warehouse.

Hides, Skins and Wool—Trade in this market is very good. Unwashed wools have risen from 1c to 2c per lb., and fleece wool, new clip, has also risen 1 to 2c per lb. This is due to the fact that wools in the English market have risen 10 per cent., consequently the rise in the Canadian market. We quote the following prices:

HIDES

No. 1 green, per lb.	0 08
" 2 " " "	0 07
" 1 " steers, per lb.	0 08½
" 2 " " "	0 07½
Cured, per lb.	0 08½

CALFSKINS.

Veal skins, No. 1, 6 to 12 lb. inclusive	0 10
" 2 " " "	0 08
" 1 " 15 to 20 lb "	0 09
" 2 " " "	0 07
Deacons (dairies), each	0 65
Sheep skins	1 00
Lamb skins	0 40
Shearings	0 35

WOOL.

Unwashed wool, per lb.	0 11½	0 13
Fleece wool, new clip, per lb.	0 19	0 20
Pulled wools, super, per lb.	0 20	0 21½
extra	0 22	0 24

BUSINESS CONDITIONS IN BRITISH COLUMBIA.

Special correspondence to **HARDWARE AND METAL.**

Vancouver, B. C., July 15, 1901.

CHANGES are not frequent in the iron and metal market in British Columbia. Demand is steady and good, and with the opening up of new mining properties, and the increased development of old, machinery is being turned out in large quantities. The construction of tugs and other small craft assists in keeping the foundries and machine shops busy and, while of late there have not been any very large contracts let beyond repairs to ocean ships, business has been steady.

The B. C. Electric Railway Co. have in hand considerable work which will require a large amount of rails. There is an extension or two, and double tracking of one of their longest bridges, besides the relaying of a portion of double track where permanent pavement is to be laid. These rails are all ordered six months beforehand, so that they may be brought around from England, the extra cost of bringing them from the States being very high.

Freight is moving brisker. Nome steamers were in port this week taking on cargoes for that faraway port, and for St. Michaels, the goods for the latter point being destined for Dawson, and will be shipped up the Yukon River. It is such staples as hardware and the heavier and bulkier things which are not affected by the long transportation, and which cost the most when handled quickly over the direct route via the White Pass. The Melville Dollar took on about 1,000 tons for the Northern

Commercial Co., besides loading coal at Ladysmith.

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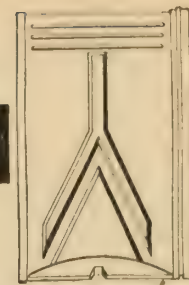
Fires are doing great damage, both raging as bush fires and destroying mills. As to the former, however, the rain of yesterday and last night will be sufficient to stay the progress of the fires, which have been burning on the mainland and Vancouver Island, destroying large extents of valuable timber. Across the inlet from Vancouver six have been going, and it was feared up till yesterday that a saw mill located there would have gone. But the wind changed and the rain came.

Last Thursday night the mills of the Canadian Pacific Lumber Co., a short distance up the inlet from Vancouver, at Port Moody, were burned, only the offices, planing mill and some lumber being saved. The fire was supposed to have originated in the dry kiln, and as the only water protection was that possessed by the company in a reservoir, it was with great difficulty that any of the buildings were saved. Those which escaped destruction were on the other side of the railway track. Mr. T. W. Paterson, M. P. P., was the owner, and he leased the establishment to the company. The loss will be about \$80,000, and insurance \$30,000 or \$35,000. The company will rebuild.

The Wardrobe Lumber Co.'s mill at Fernie was also burned, with a loss of \$15,000.

• • •

It has taken longer this Spring and Summer to clear the freight from White Horse than in any previous year. Every Winter large consignments are held over there, and with the first high water of Spring these are rushed to Dawson. The water in the Yukon has risen so slowly this year that transportation companies were afraid that if they waited until it was sufficiently high to allow steamers to take full cargoes, they might find that they would be left with several thousand tons of freight on their hands at White Horse at the close of the season. To surmount this difficulty barges are being used and towed down stream. They draw little water comparatively, and can take a good load, the distribution of weight being over a larger surface and more evenly than on a steamer. Several old steamers from which the machinery had been removed were used as barges by the White Pass & Yukon Co. At last accounts there was still over a thousand tons of freight lying at White Horse, but it should not take long to clear this up, since barges have been pressed into service. It was all the more urgent, as it was expected

**EMPIRE SHINGLES**

[Made of Tinned Steel.
Galvanized or Painted.]

The only shingles made that are fully formed into shape first, and galvanized afterwards—no acids being used.

As a result, galvanized Empires have no raw edges or cracked surfaces exposed—they are the perfection of roof covering—absolutely fire, lightning and rust proof.

When you wish THE VERY BEST order EMPIRES.

METALLIC ROOFING CO.

WHOLESALE MANFRS. LIMITED
TORONTO, CANADA.

that with the special commodity rates large amounts of freight would be on the move this month.

* * *

The lumber industry will be benefited by a concession in freight rates which has been granted by the C. P. R. Heretofore the 40c rate only applied to territory west of the western boundary of Manitoba, but this has now been extended to that province. This action was taken by the Canadian transcontinental railway after the conference of the representatives of the American roads at Chicago recently, which decided to extend the 10c rate to all points west of the Missouri River. The new rate, however, applies only to spruce and hemlock, and will be of especial benefit to the mills in the interior of the province, where these timbers are largely sawn. The agitation for this has been going on for a considerable time, and it is also expected that after a while it will apply also to cedar. As Manitoba is competitive territory, and the American roads maintain a 50c rate on cedar to it, the C. P. R. cannot cut.

* * *

The blue funnel liner Stentor will be in port to-day with a thousand tons of general cargo from Liverpool. It is expected she will have cement on her local dealers, which will relieve the scarcity.

A week from tomorrow the million dollar railway bridge at New Westminster, built by the Government, will be opened with grand attendant ceremonies. The last spike will be a gold

one, and will be driven with a silver hammer by the lieutenant-governor, and the premier and his cabinet will be present. There will be a five-mile steamboat procession and an evening's illumination.

The last two dynamos for the electric plant at Lake Beautiful have arrived, and will soon be in place. The machinery is very heavy and is on two cars specially designed for the carrying of heavy weights. Most of the plant was manufactured at Sherbrooke, Quebec.

Mr. John Moodie, in this city, thinks he has discovered iron ore in his back-yard. A small creek ran through it, and he complained that rubbish was being dumped into it. When the health inspector investigated the cause of the discoloration he found that the stream ran over what appeared to be a bed of iron ore, and the rust was the source of complaint.

The schooner Robert R. Hind has arrived at San Francisco with 900 tons of British Columbia granite, the first sent south in several years. The stone comes from the same quarry as that which was used in the construction of the San Francisco mint and postoffice, and is consigned to the Northwest Construction Co.

LONDON METAL MARKETS.

From The Metal Market Report July 20.

Pig Iron—Scotch warrants Glasgow, closed at 51s 9d, unchanged since last issue. Middleboro No. 3 foundry closed at 42s 7½d, a slump of 1½d since last week.

Tin—Spot tin opened quiet at £119 12s 6d, futures £120 5s, and after sales of 70 tons of spot and 30 tons of futures closed firm at £120 for spot and £120 12s 6d for futures, making price as compared with last issue 15s higher on spot and 12s 6d higher for futures.

Copper—Spot copper opened easy at £57 10s, futures £57 7s 6d, and after sales of 50 tons of spot and nil tons of futures, closed quiet at £57 11s 3d for spot and £57 10s for futures, making price as compared with last week 6s 3d higher for spot, and 7s 6d higher for futures.

Lead—The market closed at £11 13s 9d, making prices as compared with last week 1s 3d higher.

Spelter—The market closed at £22 2s 6d, making price as compared with last week 2s 6d higher.

A. Levesque has registered under the style of J. Descarries & Cie., general merchants, Grand Mere.

PITTSBURG METAL MARKETS.

From The Iron Trade Review, July 21, 1904.

Pig Iron—Inquiries for pig iron continue numerous, and while many consumers are merely feeling the market, a few are covering their third quarter requirements. As a result of this limited buying the market on foundry iron as well as forge is somewhat firmer, while merchant furnaces in the valleys will not take Bessemer under \$11.75, and others are holding out for \$12. Several concerns, believing that the bottom has been reached, have been picking up all the odd lots of iron offered at low prices during the past ten days, and in several instances extremely low prices were named. These prices cannot be taken as a criterion of the ordinary market. On No. 2 foundry iron as low as \$11.40 at the furnace was done while forge sold at \$11. On Bessemer \$11.40 was reached and on basic \$11.15 at the furnace was the low point. It is impossible to secure iron at these prices to-day. A few producers are extremely optimistic on the outlook while others consider the present flurry a repetition of the bulges in the market during the past six months, after each of which new low records on iron for this year were established. The range of prices is no doubt due to the varying cost of production among the furnacemen, the prices already quoted representing the low points reached and which no doubt represent a loss to the operators on present ore and coke prices, last year's ore prices not being taken into consideration. We revise quotations as follows:

Bessemer, Valley	\$11 75 to \$12 50
Bessemer, Pittsburgh	12 60 to 12 85
No. 1 Foundry	12 75 to 13 00
No. 2 Foundry	12 35 to 12 60
Grav forge, Pittsburgh	12 00 to 12 15
Chilled basic, Valley	11 40 to 11 50
Chilled basic, Pittsburgh	12 25 to 12 35

Steel—The tonnage of billets and sheet bars continues limited, and so far as can be learned few consumers are paying association prices. While mills outside of the association are shading prices openly, there are numerous reports of association mills selling at the agreed prices with commissions of from \$1.50 to \$2 per ton being named, while the amount of defective steel that is being rolled, judging from the reports of concessions agreed upon before the material goes through the mills seems to be very heavy at present.

Bars—Both iron and steel bars continue quiet, although heavy buying in iron bars is looked for in the near future. While steel bars are being shaded in the west, no concessions are being named in this market. We make the following quotations: Bar iron,

1.25c to 1.30c Pittsburgh for local delivery, while for western shipments quotations are based on 1.25c to 1.35c Pittsburgh. Hoops are held at 1.55c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open-hearth, 1.40c; bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open-hearth, 1.40c; plow beams and cultivator beams, 1.35c net; channels, angles, zees and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 lbs. of a size, not less than 1,000 lbs., 10c advance; less than 1,000 lbs. of a size, 30c advance.

Pipes and Tubes—There is little shading on merchant pipe, as prices have reached a point where further concessions are practically impossible except at a loss. Most of the mills are on in full, and while the merchant pipe trade is seasonably light, the tonnage of line pipe on the books of the leading producer is large.

Wire and Wire Nails—Prices continue to be shaded, and but little business is being offered. Wire and nail plants continue idle or are operating at a limited capacity.

Coke—Inquiries are in the market for a large tonnage of furnace coke for delivery during the next three years, to cover iron contracts for the New York tunnel castings. It is probable that this business will be placed before the end of the week. Low prices continue to rule on furnace coke, \$1.35 being quoted by some producers for delivery during the third quarter, while for fourth quarter delivery \$1.40 and \$1.45 is asked. On foundry coke quotations range from \$1.75 to \$1.85. About 10,500 ovens continue idle, the curtailment of output having about reached its high point.

POWER STATION.

WORKMEN have commenced excavating the foundation for the sub-station to be erected on the west side of Davenport road, Toronto, for the Toronto & Niagara Power Co. The contracts for the building have been awarded, and amount altogether to about \$100,000. The excavation indicates that the building will be 225 feet long and 80 feet wide. It has been stated that the structure would be absolutely fire proof, the material consisting of concrete, brick, stone and iron.

It is understood to be the intention of the company to build another sub-station on the banks of the Niagara River above the power house. The two sub-stations will be almost identical in construction.

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL
Room 308 McIntyre Block,
Winnipeg, July 17, 1904.

BUSINESS continues bright and prospects are good. All staple lines are well maintained at good prices and are meeting the expectations of the trade. Already the spacious exhibition grounds are alive with the numerous exhibitors making ready for the great Dominion fair.

The market practically maintains the price list the same, with little or no change of any note.

We quote :

Barbed wire, 100 lb.	\$3 15
Plain galvanized.	6 to 8 3 39
Plain galvanized.	9 2 50
Plain galvanized.	10 3 50
"	12 3 10
"	13 3 20
"	14 3 90
"	15 4 45
"	16 4 60
Plain twist	3 15
Staples	3 65
Oiled annealed wire.	10 3 42
"	11 3 48
"	12 3 56
"	13 3 66
"	14 3 76
"	15 3 91

Annealed wires (uncoiled) 10c. less.
Horseshoes, iron, No. 0 to No. 1..... \$4 75

Horsenails, No. 4—1 1/2 in., list price	0 48
" " 5—2 " " "	0 32
" " 6—2 1/2 " " "	0 28
" " 7—2 1/2 " " "	0 24
" " 8—2 1/2 " " "	0 20
" " 9—2 1/2 " " "	0 20
" " 10—2 1/2 " " "	0 20
" " 11—2 1/2 " " "	0 20
" " 12—2 1/2 " " "	0 20
" " 14—3 1/2 " " "	0 20

Discount on these prices 40, 10, 7 1/2 per cent., plus 15c. per box.

No. 2 and larger	4 45
Snow shoes, No. 0 to No. 1	4 60
No. 2 and larger	4 45
Steel, No. 0 to No. 1	4 45
No. 2 and larger	4 20

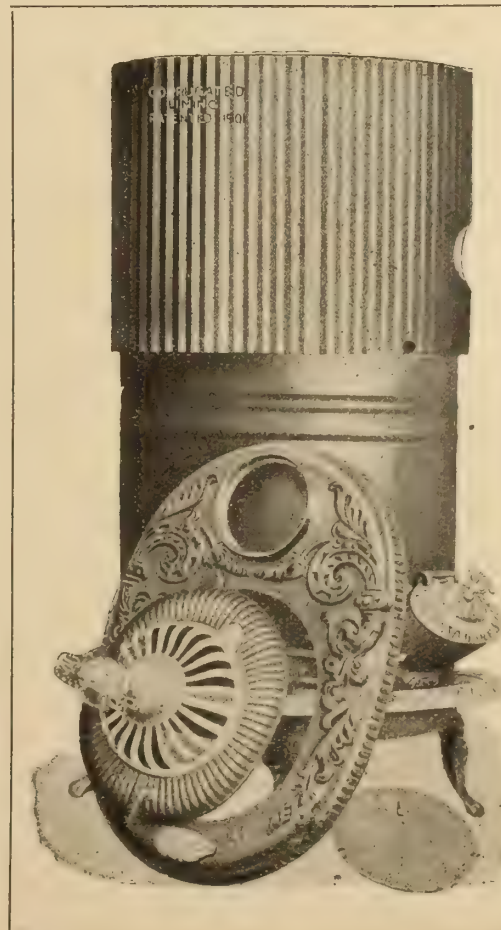
Cut Nails—	Wire Nails—
2d 1 in.	1 in.
3d Fin. 1 1/4 in.	1 1/4 in.
3d 1 1/4 in.	1 1/2 in.
4d 1 1/4 in.	1 1/2 in.
5d 1 1/4 in.	1 1/2 in.
6d 2 in.	2 in.
8d 2 1/2 in.	2 1/2 in.
10d 3 in.	3 in.
20d 4 in.	3 1/2 in.
30d 4 1/2 in.	4 in.
40d 5 in.	4 1/2 in.
50d 5 1/2 in.	5 in.
60d 6 in.	5 1/2 in.
	6 in.

Bar iron (basis)	2 50
Swedish iron (basis)	4 75
Sleigh shoe steel	2 85
Spring steel	3 25
Machinery steel	3 50
Tool steel, Black Diamond, 100 lb.	8 50
Jessop	13 00
Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge	3 75
24 gauge	3 90
26 gauge	4 00
gauge	4 10

Galvanized Iron, Apollo, 16 gauge	4 00
18 and 20 gauge	4 00
22 and 24 gauge	4 25
26 gauge English or 28 American	4 25
28 gauge	4 50
30 gauge or 10 1/2 oz	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge	4 25
26 gauge	4 50
28	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	
Genuine Russian, per lb.	11
Imitation	07 to 08
Tinned, 24 gauge, 100 lb	8 00
26 gauge	8 05
Tinplate, 1C charcoal, 20 x 28, box	9 50
" IX	11 50
" IXX	13 50
Ingot tin	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished	3 15
Sheet zinc, cask lots, 100 lb	7 00
Broken lots	7 50
Pig lead, 100 lb.	5 50
Black iron pipe, 1/4 inch	2 55
" 1/2 "	2 55
" 3/4 "	2 80
" 1 "	3 25
Black iron pipe, 1/2 inch	4 20
" 1 "	5 35
" 1 1/2 "	8 20
" 2 "	10 00
Rope, sisal, 7-16 and larger, basis	11 75
Manila, 7-16 and larger, basis	15 25
Lathyrarn	11 25
Solder	20
Axes, chopping	\$ 6 75 to 12 00
" double bitts	12 00 to 18 00
Bluestone	5 25
Screws, flat head, iron, bright	85 and 10 p.c.
Round " "	80 p.c.
Flat " brass	75 and 10 p.c.
Round " "	70 and 10 p.c.
Coach	70 p.c.

Bolts, carriage, 3/8 or smaller	60 and 5 p.c.
" 7-16 and up	55 p.c.
Bolts, machine, 1/2 and under	55 and 5 p.c.
" 7-16 and over	55 p.c.
Bolts, tire	60 and 5 p.c.
Bolt ends	55 and 5 p.c.
Sleigh shoe bolts	70 p.c.
Machine screws	70 p.c.
Plough bolts	55 and 5 p.c.
Square nuts, case lots	3c. discount.
" " small lots	2 1/2 c.
Hex " case lots	3c.
" " smaller lots	2 1/2 c.
Rivets, iron	50 and 10 p.c.
Copper, No. 8	32
No. 12	36
Coil chain, 3-16 inch	9 1/2
" 1/2 inch	7 1/2
" 5-16 inch	5 1/2
" 3/4 inch	5 1/2
" 7-16 inch	4 1/2
" 1 inch	4 1/2
" 3/4 and 1/2 inch	4
Spades and shovels	40 and 5 p.c.
Harvest tools	60 p.c.
Axe handles, turned, s.g. hickory, doz.	\$3 15
No. 1	1 90
No. 2	1 60
Octagon extra	2 30
No. 1	1 60
Files common	70 and 10 p.c.
Diamond	60 p.c.
Building paper:	
Anchor, plain	65c.
" tarred	70c.
Pure fibre, plain	67 1/2 c.
" tarred	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol	30 p.c.
" military	15 p.c.
American R.F.	30 p.c.
C.F. pistol	5 p.c.
C.F. military	10 p.c. advance.
Loaded shells:	
Eley's soft, 12 gauge black	15 00
chilled, 12 gauge	16 00
soft, 10 gauge	18 00
chilled, 10 gauge	19 00



Merrick, Anderson & Co.

117 Bannatyne Street East
WINNIPEG

The D. MOORE COMPANY, Limited
HAMILTON, CANADA

Heavy Corrugated Steel Lining

Patented

Will last at least twice as long as a very much heavier plain lining, as the air space between it and the body prevents the latter from becoming red hot and burning out. The corrugated lining retains and gives out considerably more heat than the ordinary lining.

MANITOBA DEPOT:
Merrick, Anderson & Co.

117 Bannatyne Street East
WINNIPEG

Shot, Ordinary, per 100 lb	6 00
Chilled	6 55
Powder, F.F., keg	4 70
F.F.G.	5 00
Tinware, pressed, retinned.	70 and 10 p.c.
" " plain.....	75 and 2½ p.c.
" " pieced.....	
Japanned ware	37½ p.c.
Enamelled ware, white.....	45 p.c.
" " Famous.....	50 and 10 p.c.
" " Imperial.....	50 and 10 p.c.
Green Wire Cloth.....	1 55

PETROLEUM.

Water white American	27½ c.
Prime white American.....	25½ c.
Water white Canadian.....	25½ c.
Prime white Canadian.....	24½ c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap.....	5
Copper (heavy).....	8½ c. per lb.
Yellow brass (heavy).....	7½ c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead.....	2c. to 2½ c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead.....	\$6 00 to \$6 50
Putty in bladder, 2½ lb., in keg of 100 lbs.	0 02½
Turpentine, pure, in barrels.....	\$ 87
Less than barrel lots.....	0 92
Linseed oil, raw.....	0 52
Boiled	0 55

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine.....	0 29
" " extra engine.....	0 27
" " dynamo.....	0 35
" " black.....	0 22
" " cylinder.....	\$0 50 to 0 75
(as to quality)	

Harness oil.....	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00½
" " 2nd pressure.....	1 09½

HINTS FOR THE SALESMAN.

TOO much time is lost in watching for possible evil to ourselves resulting from another's methods. "Let the other fellow lose it."

Competition is like the weather, it's different on different days, but it's always with us. The man who fears the weather is sure to "catch cold."

The man who knows the most is not always the best salesman, nor does the man with the oiliest tongue sell the most goods.

He who does all the talking is generally less effectually persuasive than if he gave the other an opportunity to express himself.

One of the hardest men to sell is he who always agrees with you. Sometimes it is a good plan to force him to disagree. It warms him up and gets him interested.

Cultivate good cheer. There is no more potent factor in salesmanship than the pleasant smile, the hearty laugh and a strong, true feeling of "good will toward all mankind."—Ex.

A HARDWARE MAN'S WIFE.

TALKING of women and the help they can give their husbands when in business," said the old man, as he leaned back in his chair, "reminds me of an episode that happened to a friend who was in the hardware business up in Wellfleet. If it don't show how a devoted wife can throw herself into the breach, with a willingness to give up all to save her husband from ruin, nothing on earth can make plain that state of mind.

"This hardwareman was doing a good business, and for a number of years made money. He was a generous sort of a fellow and he gave his wife a monthly allowance of a good, fair sum. Told her to spend what she had to and save the rest. He ran along in this shape for about fifteen years, and then got in a speculation, and got caught, as any man is likely to be.

"He used all the money he had, and then stretched his credit to the breaking point. There came a time when \$10,000 would tide him over. Without that he would go to smash, and the labor of years be lost. But he did not know in what direction he could turn for the money. He tried and tried again, only to meet with failure. He gave it up in despair, and went home and told his wife just how matters stood, and what lay before them.

"She listened quietly with her hands clasped before her. When he was through, she said, 'John, you have been a good husband to me. You have been kind and generous. For years I have tried to save a little. I will give it to you freely. If I can aid to save you I will. I will bring my savings bank book, and it shall be yours.'

"She arose, and went to the bureau drawer. He sat and looked at her in amazement. She brought the book, handed it to him and said: 'It is all yours, dear.' He took it and opened it in a dazed manner. She had a balance of \$68.40."—Hardware Dealers' Magazine.

THEIR ANNUAL OUTING.

THE employees of H. A. Clemens & Co., the Guelph Carriage Top Co. and Steel's Wire Works, Guelph, Ont., held their annual picnic to Idylwyld recently. The event was enjoyed by all. During the afternoon a long programme of sports was run off under the direction of Mr. Harry McKenzie, the principal feature of which was the relay race between the three factories, which was won by Clemens'. The winners of the other events were:

Boys' race, ten years and under, D. Mitchell.

Girls' race, ten years and under, G. England.

Boys' race, sixteen years and under, E. Hugill.

Girls' race, sixteen years and under, Frances Chase.

Single men's race, C. MacLachlan.

Young ladies' race, Miss L. Steele.

Married men's race, M. Sheady.

Running jump, H. Steele.

Running hop-step-and-jump, Alex. Steele.

Wheelbarrow race, J. Marshall and J. Rance.

Three-legged race, J. Rance and H. Steele.

Ladies' and gents' needle race, Miss Lena Steele and J. Rance.

Girls' shoe race, sixteen years and under, Frances Chase.

Egg race, D. Tindall.

Ladies' tack race, Miss L. Steele.

Relay race between three factories, H. A. Clemens & Co.

Consolation race for girls, Miss M. Wilson.

A baseball game was played between Steele's and Clemens' vs. Carriage Top Co., and was won by the latter. Score, 7 to 4. The batteries for the winning team were R. McElroy and C. MacLachlan, and for the losers J. Rance and A. Steele.

"COMET"

Brand

Galvanized Sheets

are made of British Steel, manufactured at the works of

W. Gilbertson & Co., Limited

Pontardawe, Wales.

No better quality made.

Price low.

AGENT

Alexander Gibb, - Montreal

You Can Sell Ladders.

Fruit pickers want them. Every home should have them.

The Betzner-Ziegler

EXTENSION LADDER

is the best ladder of the sort made.

Send for booklet with prices. It illustrates many other specialties in wood which can be sold by the hardware dealer.

The Berlin Woodenware Co., Berlin, Ont.

ALEX. McARTHUR & CO., Limited, 82 McGill St., Montreal

YOU CAN DEPEND ON OUR

Ready Roofing, Sheathing and Black  Diamond Tarred Felts

These and our

Building Papers, Fibre and Manilla Wrappings, etc.,

are made at our own Mills and Factory

FELT FACTORY

Harbour and Logan Sts., MONTREAL

PAPER MILLS

JOLLIETTE, QUE.

CURRENT MARKET QUOTATIONS.

July 22, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

TINPLATES.

Charcoal Plates—Bright.
M.L.S., equal to Bradley— Per box.
I.C., usual sizes..... \$6 50
I.X..... 8 00
I.X.X..... 9 50
Famous, equal to Bradley—
I.C..... 6 75
I.X..... 8 25
I.X.X..... 9 75

Raven and Vulture Grades—
I.C., usual sizes..... 4 25
I.X..... 5 00
I.X.X..... 5 75
I.X.X.X..... 6 50

"Dominion Crown Best"—Double Coated, Tissue.

I.C..... Per box.
I.X..... 5 50
I.X.X..... 6 50
I.X.X.X..... 7 50
Allaway's Best—Standard Quality.
I.C..... 4 50
I.X..... 5 50
I.X.X..... 6 50

Coke Plates—Bright.

Bessemer Steel—
I.C., usual size, 14x20..... 3 35
I.C., special sizes, base..... 3 60
20x28..... 7 10

Dean or J. G. Grade—
I.C., 20x28, 112 sheets..... 7 50
I.X., Terne Tin..... 10 50
Charcoal Tin Boiler Plates.
Cookley Grade—
X.X., 14x56, 50 sheet bxs. }
" 14x60, " }
" 14x65, " }
Tinned Sheets. }
72x30 up to 24 gauge..... 7 25
" 26 "..... 7 75

IRON AND STEEL.

Common bar, per 100 lb..... 1 80
Refined..... 2 20
Horseshoe Iron..... 2 25
Hoop steel, 1 1/2 to 3-in. base..... 2 75
Sleigh shoe steel..... 2 10
Tire steel..... 2 30
T. Firth & Co.'s tool steel, per lb 0 12 1/2
B. K. Morton & Co.—
" Alpha " tool steel..... 0 70
" M " Self-Hardening..... 0 60
" I " Standard..... 0 14
Jessop's high speed steel..... 0 50
" standard tool steel..... 0 14
" crucible sheet steel..... 0 14
" Chas. Leonard's tool..... 0 08
Crucible Steel Co.
" Black Diamond..... 0 10
" Silver steel..... 0 13
" Special..... 0 17
" Rex high speed steel..... 0 65
" Self-Hardening..... 0 45
Sanderson's Crucible Tool..... 0 03
" Superior..... 0 12
" Extra Anil..... 0 15
" Self-Hardening..... 0 45
" Rex high speed..... 0 65
Jonas & Colver's tool steel..... 0 10
" Air Hardening..... 0 70
Drill steel, per lb..... 0 08

RABBIT METAL.

"Tandem," A..... per lb. 0 27
" B..... 0 21
" C..... 0 11 1/2
Frictionless Metal..... 0 23

Syracuse Smelting Works:

Aluminum, genuine..... 0 45
Government,..... 0 44
Tough,..... 0 40
Hard,..... 0 40
Dynamo..... 0 30
Special..... 0 25
Harmony..... 0 22
Car Box..... 0 20
Extra..... 0 15

The Canada Metal Co.:

Imperial, genuine..... 0 40
Metallic..... 0 30
Hercules..... 0 20
Star..... 0 15
No. 1..... 0 12
No. 2..... 0 10
No. 3..... 0 06
No. 4..... 0 05

Geo. Langwell & Son.

No. 1..... 0 08
No. 2..... 0 07
No. 3..... 0 05
Extra..... 0 03 1/2

BLACK SHEETS.

Montreal Toronto
10 and 16 gauge..... 2 25 2 50
18 gauge..... 2 30 2 50
20 gauge..... 2 30 2 50
22 to 24 gauge..... 2 35 2 70
26..... 2 40 2 80
28..... 2 40 2 90

COPPER WIRE.

Discount, 50 per cent.
CANADA PLATES.
Ordinary..... 2 60
All bright..... 3 50
Galvanized Canada Plates—
Ordinary..... Dom.
Crown.....

18x24x52..... 4 25 4 35
" 60..... 4 50 4 60
20x28x80..... 8 50 8 70
" 94..... 9 00 9 20

GALVANIZED SHEETS.

Fleur-de-Lis. Gordon Crown. Comet Bell. Head
16 gauge..... 3 65
18 to 24 gauge..... 3 75 3 75 3 75 3 75
26..... 4 00 4 00 3 90 4 00
28..... 4 25 4 25 4 05 4 25

American brands, \$4.00 for 28 gauge.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 1/2 "..... 5 60
" 3/4 "..... 4 45
" 1 "..... 3 85
" 1 1/2 "..... 3 70
" 2 "..... 3 55
" 2 1/2 "..... 3 45
" 3 "..... 3 35
" 3 1/2 "..... 3 25

Haute, kernel and post chains, 40 to 40 and 5 per cent.

Cow ties..... 40 p.c.
Tie out chains..... 65 p.c.
Stall fixtures..... 35 p.c.
Trace chain..... 45 p.c.
Jack chain, iron, single and double, discount 35 p.c.
Jack chain, brass, single and double, discount 40 p.c.

COPPER.

Casting, car lots..... Ingot. Per 100 lb.
Bars..... 13 75
Cut lengths, round, 1/2 to 1 in. 21 00 23 00
" round and square, 1 to 2 inches..... 21 00 23 00

Sheet.
Plain, 16 oz., 14x48 and 14x60..... 20 00
Plain, 14 oz.,..... 21 00
Tinned copper sheet..... 24 00
Planished..... 32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb..... 0 22
" 35 to 45 "..... 0 21
" 50-lb. and above "..... 0 20

BOILER AND T.K. PITTS.

Plain tinned, per lb..... 0 28
Spun, per lb..... 0 32

BRASS.
Rod and Sheet, 14 to 30 gauge, 15 per cent
Sheets, hard-rolled, 2x4..... 0 23
Tubing, base, per lb..... 0 23 1/2

ZINC SPELTER.
Foreign, per 100 lb..... 6 00 6 25
Domestic..... 6 25

ZINC SHEET.
5-cwt. casks..... 6 15 6 50
Part casks..... 6 50 7 00

LEAD.
Imported Pig, per 100 lb..... 3 20 3 30
Bar, per lb..... 0 05
Sheets, 2 1/2 lb. sq. ft., by roll..... 0 06 1/2
Sheets, 3 to 6 lb..... 0 06

NOTE.—Cut sheets 1/2c. per lb., extra. Pipe, by the roll, usual weights per yard, lists at 7c. per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe 8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's..... per lb. 7 50 8 00

SHOT.
Common, \$6.50 per 100 lb.; chilled, \$7.00 per 100 lb.; buck, seal and ball, \$7.50. Discount, 17 1/2 p.c. Prices are f.o.b. Toronto, Hamilton, Montreal, St. John and Halifax. Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.
Zinc..... 6 00
Copper, discount 20 per cent. off revised list.

BATHS.
Standard Enameled.
5 1/2 ft. rolled rim, 1st quality..... 21 60
5 1/2 " 2nd..... 16 35

CLOSETS.
Fittings..... 1 00
Plain Simplex Syphon Jet..... 9 00
Emb..... 9 50

Fittings..... 1 25
Low Down Elgin or Teutonic, plain..... 6 00
Low..... 6 50
Connection..... 1 25
Plain Richelleu..... 4 25
Emb..... 4 50

Basins, P.O., 14-in..... 0 63
Basins, oval, 17 x 14-in..... 1 50
Basins, " 19 x 15-in..... 2 00

IRON PIPE

Black pipe—
Inch..... Per 100 feet.
1..... 1 95
1 1/2..... 2 05
2..... 2 15
2 1/2..... 2 25
3..... 2 35
3 1/2..... 2 45
4..... 2 55
4 1/2..... 3 05
5..... 3 15
5 1/2..... 3 25
6..... 3 35
6 1/2..... 3 45
7..... 3 55
7 1/2..... 4 05
8..... 4 15
8 1/2..... 4 25
9..... 4 35
9 1/2..... 4 45
10..... 4 55
11..... 5 05
12..... 5 15
14..... 5 35
16..... 5 55
18..... 6 15
20..... 6 35
24..... 6 75
30..... 7 15
36..... 7 55
42..... 8 35
48..... 9 15
54..... 9 95

Galvanized pipe—
Inch..... 2 88
"..... 3 11
"..... 3 42
"..... 4 40
"..... 6 35
"..... 8 30
"..... 10 75
"..... 14 80
Malleable Fittings—Discount 20 p.c.
Cast Iron Fittings—
Standard, 57 1/2 per cent.; unions, 55 per cent.
on nipples, headers and flanged unions, 60 per cent.

PLUMBERS' BRASS GOODS.

Standard Compression work, dis. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra discount 10 per cent.
Lever handle Stops and Waste, discount 60 per cent. With in lots of 2 dozen and over, an extra discount of 10 per cent.
J.M.T. Globe, Angle and Check Valves, discount 55 per cent.

Standard Globe, Angle and Check Valves, discount 65 per cent.

Kerr's special standard globes and angles, discount 60 per cent.
Kerr's Jenkin disc, copper-alloy disc and heavy standard valves, discount 60 per cent.
Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam-radiator valves, discount 70 per cent.

Kerr's Jenkin disc, copper-alloy disc radiator valves, discount 70 per cent.
Kerr's quick-opening hot-water radiator valves, discount 70 and 10 per cent.

Weber's (Kerr) patent straightway gate valves, brass, discount 55 per cent.

Weber's (Kerr) patent straightway gate valves, I.B.B.M., discount 70 per cent.

J. M. T. Radiator Valves discount 55 per cent.

Standard Radiator Valves, discount 65 per cent.

Patent Quick-Opening Valves, discount 65 per cent.

No. 1 compression bath cock..... net 1 75

No. 4 "..... 1 90

No. 7 Fuller's..... 2 10

No. 4 1/2 "..... 2 25

Patent Compression Cushion, basin cock, hot and cold..... per doz. 15 00

Patent Compression Cushion, bath cock, No. 2208..... 2 25

Square head brass cocks, discount 55 per cent. " iron " 50 to 60

Thompson Smoke-test Machine \$25.00

RANGE BOILERS.

Copper, 30 gallon..... 22 00

" 35 "..... 24 00

" 40 "..... 28 00

Discount off copper boilers 15 per cent.

SOID PIPE AND FITTINGS

Light soil pipe, discount, 50 per cent.

Med. and Extra heavy pipe and fittings, dis. 60 per cent.

7 and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.

Bar, half-and-half, guaranteed..... 0 18

Bar, half-and-half, commercial..... 0 17

WRENCHES

Acme, discount 35 to 37 1/2 per cent.

Agricultural, discount 60 per cent.

Coe's Genuine, discount 20 to 25 per cent.

Towers Engineer..... each 2 00 7 00

G. & K.'s Pipe..... per doz. 5 80 6 00

Burrell's Pipe..... each 3 00 3 40

Pocket..... per doz. 6 25 2 90

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French "	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt. Less than this quantity 4c. extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	1 12½
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
" umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorator's Pure	5 00
Monarch	4 75
Decorator's Pure	4 25
Essex Genuine	5 00
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs	4 75	
No. 1, 560 lb. casks, per cwt	4 00	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peasey's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	70
Francis-Frost Co.'s "Ark" B'd	1 25
"British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 20
Sterling House Paint	1 10
"Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 10
Bladders in kegs, boxes or loose	1 85
25-lb. tins.	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots. Per gal. Net.

Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
" rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 50
Furniture, extra	1 10	1 25
" No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
" orange	2 30	2 40
Surpentine, brown japan	1 10	1 20
" black japan	1 10	1 20
No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	
Granite floor finish, per gal	2 75	
Maple Leaf coach enamels; size 1, \$1.20; size 2, 70c.; size 3, 40c. each		
Sherwin-Williams' kopal varnish, assorted case, from 1 to 1 gal., \$2.50.		

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Strip	0 19	0 20
Huttner	0 19	0 20
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 20 per cent. to list. B.B. Caps, discount 40 per cent. American.	
Central Fire Pistol and Rifle, 5 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

per lb.

Best thick brown or grey felt wads, in ½-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8 "	0 90
5 and 6 "	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8 "	1 65
5 and 6 "	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

AXES.

Chopping Axes	
Single bit, per doz.	7 00 10 00
Double bit, " "	10 00 18 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters' Axes	5 50 6 00
Boys' Axes	6 25 7 00
Splitting Axes	7 00 12 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys', handled	5 75
hunters	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE.

Ordinary, per gross	6 00 7 00
Best quality	10 00 12 00

BELLS.

Hand.

Brass, 60 per cent.	
Nickel, 55 per cent.	
Cow	
American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	
Door	
Gongs, Sargent's	5 50 8 00
" Peterboro', discount 50 and 10 per cent. off new list.	
Farm	
American, each	1 25 3 00
House	
American, per lb.	0 35 0 40

BELLOWS.

Hand, per doz.	3 35 4 75
Moulders, per doz.	7 50 10 00
Blacksmiths', discount 49 per cent.	

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	
Agricultural, not wider than 4 in., 75 per cent.	

BITS.

Auger.

Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.

Gilmour's, 47½ per cent.	
Expansive	
Clark's, 40 per cent.	

Gimlet.

Clark's, per doz	0 65 0 90
Diamond, Shell, per doz	1 00 1 50
Nail and Spike, per gross	2 25 5 20

BLIND AND RED STAPLES.

All sizes, per lb.	0 07½ 0 12
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BOLTS AND NUTS

Per cent.

Carriage Bolts, common (\$1 list)	
" " 3-16 and ½	60 and 10
" " 5-16 and ½	55 and 5
" " 7-16 and up	55 and 5
" " full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ½ and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., 5½ to 6c.	

BOOT CALKS.

Small and medium, ball	per M. 4 25
Small heel	" 4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.

BUTCHERS' CLEAVERS.

German	per doz.	6 00 9 00
American	"	12 00 18 00

BUTCHER KNIVES.

Bailey's	per doz.	0 60 6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb.	
per roll	0 90
Ready roofing, 3-ply, not under 65 lb., per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 400 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Roof	small packages 0 25
Refined Tar	per barrel 5 00
Coal Tar	" 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 10

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.90 or 2-inch.	
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BUTTS.

Wrought Brass, net revised list.	
Cast Iron	
Loose Pin, discount 60 per cent.	

Wrought Steel.

Fast Joint, discount 65, 10 and 2½ per cent.	
Loose Pin, discount 65, 10 and 2½ per cent.	
Berlin Bronzed, discount 70, 70 and 5 per cent.	
Gen. B. bronzed	per pair 0 40 0 65

CARPET STRETCHERS.

American	per doz.	1 00 1 50
Bullard's	"	6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross	7 50 8 50
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CHALK.

Carpenters' Colored, per gross	0 45 0 75
White lump	per cwt. 0 60 0 65
Red	" 0 05 0 06
Crayon	per gross 0 14 0 18

CHISELS.

Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Wormock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.

Colonial Stock Foods, 50c. packages,	per doz \$1 00
" " " 25c. pkgs.,	" 2 00
" " " 10c. "	" 7 50
" " " 25-lb. pail, each	1 30
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz	1 25
Worm	1 25
International 1 Stock Foods, \$1 packages,	per doz 8 00
International Stock Foods, per pail	2 75
" " " per bbl.	10 50
" " Poultry	\$1 pkgs. per doz 8 00
" " Worm Powders, 50c. pkgs.	4 00
" " Fine Healing Oil, per doz	8 00
" " Phenol-Chloro, \$1 pkgs., per doz	8 00
" " Hoof Ointment	8 00
" " Compound Absorbent	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.	

CLIPS.

Axe, discount 65 per cent.

EASY TO PUT ON HARD TO WEAR OUT

Aptly describes two of the many advantages possessed by Paterson's Wire Edged Ready Roofing, the only popular substitute for Shingles.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.

Plain or Corrugated.

2-inch	per 100 feet	3 00
3 "	"	4 00
4 "	"	5 25
5 "	"	6 75
6 "	"	9 00

CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	per pair	0 17½
S. & D., " 5	"	0 22½
S. & D., " 6	"	0 15
Boynton pattern	"	0 20

DOOR SPRINGS.

Torrey's Rod	per doz.	1 75
Coll. 9 to 11 in.	"	0 95
English	"	2 00

DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Miller's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.

Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAVETROUGHS.

10-inch per 100 ft. 10 00

ELBOWS (stovepipe.)

5 and 6-inch, common	per doz.	1 20
7-inch	"	1 35
Polished, 15c. per dozen extra.	"	

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western	70 and 10 per cent.
Arcade	70 " 10 "
Kearney & Foot	70 " 10 "
Disston's	70 " 10 "
American	70 " 10 "
J. Barton Smith	70 " 10 "
McClellan	70 " 10 "
Eagle	70 " 10 "
Nicholson, 60 and 10 to 60, 10 and 5	"
Royal	80 "
Globe	70 to 75 "
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.	"
Jowitt's, English list, 25 to 27½ per cent.	"
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50	"

GLASS.

Window. Box Price.

Size United Inches	Per 50 ft.	Per 100 ft.	D. Diamond 50 ft.	Per 100 ft.
Under 26	3 80	5 06		
26 to 40	4 00	5 44		
41 to 50	4 50	6 56		
51 to 60	4 75	7 50		
61 to 70	5 00	8 62		
71 to 80	5 30	9 38		
81 to 85		10 75		
86 to 90		12 30		
91 to 95		15 00		
96 to 100		18 00		

Discount 15 per cent.

GAUGES.

Marking, Mortise, Etc.

Stanley & Co. discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33 each 1 65 2 40
GILLET'S POWDERED LYE.
1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.80.

HALTERS.

Rope, ½-inch	per gross	12 00
Rope, " "	"	9 00
Rope, ¾ to 1-inch	"	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1½	"	5 20
Web	"	2 45

HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

Magnetic	per doz.	1 10	1 20
Sledge	"	"	"
Canadian	per lb.	0 07½	0 08½

Ball Peen.

English and Canadian	per lb.	0 22	0 25
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HANDLES.

Axe, 2nd growth, per doz. net	3 00	4 00
Sore door	per doz.	1 00

Fork.

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

American per doz. 1 00 1 25

Plane.

American per gross 3 15 3 75

Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

	doz. pairs.
Steel barn door	8 00 10 00
Stearns, 4-inch	4 50
" 5-inch	6 00
Zenith	9 00
Lane's covered—	
No. 11, 5-foot run	8 40
No. 11½, 10-foot run	10 80
No. 12, 10-foot run	12 60
No. 14, 15-foot run	21 00
Steel, covered	4 00 11 00
" track, 1 x 3-16 in(100 ft)	3 75
" " 1½ x 3-16 in(100 ft)	4 75

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.	
Shingle, Red Ridge 1, per doz.	4 40
" 2, " "	4 85
Barrel, Underhill	5 00

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.	
Heavy T and strap, 4-in., per lb.	0 06½
" " 5-in., " "	0 06
" " 8-in., " "	0 05½
" " 10-in., " "	0 05½
Light T and strap, discount 65 and 5 per cent.	
Screw hook and hinge—	
6 to 10 in. per 100 lb.	4 50
12 in. up	3 25
Spring, No. 20, per gro. pairs	10 50

HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter per doz. 4 00 4 50

HOLLOW WARE.

Tinned cast, 35 per cent.

HOOKS.

Cast Iron.

Bird cage	per doz.	0 50	1 10
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Clothes line, No. 61	"	0 00	0 70
Harness	"	0 60	12 00
Hat and coat	per gro.	1 10	10 00
Chandelier	per doz.	0 50	1 00

Wrought hooks and staples Canadian discount 60 per cent.

Wire.
Hat and coat, discount 60 per cent.
Belt per 1,000 0 60
Screw, bright, discount 60 per cent.

HORSE NAILS.
"C" brand, 40, 10 and 7½ per cent. off list { Oval
"M" brand, 55, per cent. { head
Countersunk, 57½ per cent.
"Monarch," 50 and 7½ per cent.
"Peerless" 50 per cent. dis.

HORSESHOES.
F.O.B. Montreal
No. 2 No. 1
and and
larger smaller.

Iron Shoes.
Fight, medium and heavy 3 65 3 90
Snow shoes 3 90 4 15

Steel Shoes.
XL, sizes 1 to 5 5 35
Light, No. 2 and larger 3 80
No. 1 and smaller 4 05
Featherweight, all sizes 0 to 4 5 35
Toeweight, all sizes 1 to 4 6 60

JAPANESE WARE.
Discount 50 per cent.

ICE PICKS.
Star per doz. 00 3 25

KETTLES.
Brass spun 7½ per cent. discount off new list.
Copper per lb. 0 30 0 50
American, 60 and 10 to 65 and 5 per cent.

KEYS.
Lock, Canadian dis. 40 to 40 and 10 per cent.
Cabinet, trunk and padlock,
American per gross 0 60

KNOBES.
Door, japanned and N.P., per doz. 1 50 2 50
Bronze, Berlin per doz. 2 75 3 25
Bronze, Genuine 6 00 9 00
Shutter, porcelain, F. & L. screw 1 30 00
White door knobs per doz. 2 00

HAY KNIVES.
Net prices.

LAMP WICKS.
Discount, 60 per cent.

LANTERNS.
Cold Blast per doz. 7 00
No. 3, "Wright's" 8 50
Ordinary, with O burner 4 00
Dashboard, cold blast 9 00
No. 0 5 75
Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.
Porcelain lined per doz. 2 20 5 60
Galvanized 1 87 3 85
King, wood 2 75 2 90
King, glass 4 00 4 50
All glass 0 50 0 90

LINE.
Fish per gross 1 05 2 50
Chalk 1 90 7 90

LAWN MOWERS.
Woodyatt, 10½-in. wheel, 14-in. cut 8 50
Star, 9-in. " " (net) 2 87½
Daisy, 8-in. " " " 7 00
Philadelphia, 7½-in. " " " 15 80
Ontario, 7-in. " " " 9 50
King Edw'd, 12-in. " " " 9 50

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:
10½-in. high wheel 7 50 10 00
9-in. " 5 50 6 25
8-in. " 4 90 5 50
Discount 50 per cent.

LOCKS.
Canadian, 50 to 50 and 10 per cent.
Russell & Erwin per doz.

Cabinet.
Eagle, discount 30 per cent.

Padlocks.
English and Am. per doz. 0 50 6 00
Eagle, discount 20 to 25 per cent.

MACHINE SCREWS.
Iron and Brass.
Flat head, discount 25 per cent.
Round head, discount 20 per cent.

MALLETS.
Tinsmiths' per doz. 1 25 1 50
Carpenters', hickory, " 1 25 3 75
Lignum Vitae 3 85 5 00
Caulking, each 0 60 2 00

MATTOCKS.
Canadian per doz. 5 50 6 00

MEAT CUTTERS.
American, discount ¾ per cent.
German, 15 per cen
Gem each 1 15

MILK CAN TRIMMINGS.
Discount 25 per cent.

NAILS. Cut. Wire.
2d and 3d 3 30 3 45
3d 2 95 3 12
4 and 5d 2 70 2 95
6 and 7d 2 60 2 80
8 and 9d 2 40 2 55
10 and 12d 2 35 2 50
16 and 20d 2 30 2 45
30, 40, 50 and 60d (base) 2 30 2 45
Cut nails in carlots 5c. less.
Wire nails in carlots are \$2.40.
Steel cut nails 10c. extra.
Miscellaneous wire nails, discount 75 per cent.
Coopers' nails, discount 30 per cent.

NAIL PULLERS.
German and American 1 75 2 50

NAIL SETS.
Square, round and octagon, per gross 3 38
Diamond 1 00

POULTRY NETTING.
2-in. Mesh, 19 w.g., dis. 60 per cent.
2-in. Mesh, 16 w.g. and heavier, 50 p.o.

OAKUM.
U. S. Navy per 100 lb. 6 75
Plumbers 3 00

OILERS.
McClary's Model galvanized oil can, with pump, 5 gallon, per dozen 10 00
Davidson oilers, discount 40 per cent.
Zinc and tin, discount 50, 50 and 10 per cent.
Copper per doz. 1 25 3 50
Brass 1 50 3 50
Malleable, discount 25 per cent

GALVANIZED PAISLS.
Dufferin pattern pails, discount 45 per cent.
Flaring pattern, discount 45 per cent.
Galvanized washtubs, discount 45 per cent

PIECED WARE.
Discount 40 per cent. off list, June, 1899.
10-qt. flaring sap buckets, discount 40 per cent
6, 10 and 14-qt. flaring pails dis. 40 per cent.
Creamer cans, discount 40 per cent.

PICKS.
Per dozen 6 00 9 00

PICTURE NAILS.
Porcelain head per gross 1 35 1 50
Brass head 0 40 1 90

PICTURE WIRE.
Tin and gilt, discount 75 per cent.

PINE TAR.
½ pint in tins per gross 7 80
1 " " 9 60

PLANES.
Wood bench, Canadian discount 40 per cent.,
American discount 50 per cent.
Wood, fancy Canadian or America 37½ c.
40 per cent

The New U.M.C. 33 Primers

give an added ballistic value to the powder and shot charges in all U. M. C. smokeless powder shells.

THE NO. 3 U. M. C. PRIMERS

were the first and best primers for smokeless powder ever made here or abroad—until the advent of the new U.M.C. 33 primers, which were substituted for them some time ago.

The U.M.C. Southern Squad used shells primed with the new 33 primers.

The Union Metallic Cartridge Co.

Agency, 313 Broadway, New York, N.Y.

Factory, BRIDGEPORT, CONN.

PLANE IRONS.		SAP SPOUTS.		STAPLES.		ENAMELLED WARE.	
English	per doz. 2 00 5 00	Bronzed iron with hooks	per 1,000 7 50	Galvanized	3 00	White, Princess, Turquoise, Blue and White	
PLIERS AND NIPPERS.		"Eureka" tinned steel, hooks	8 00	Plain	2 80	discount 50 per cent.	
Buttons genuine, per doz. pairs,	discount	SAWS.		Coppers, discount 45 per cent.		Diamond, Famous, Premier, discount 50 and	
37½ to 40 per cent.		Hand, Disston's, discount 12½ per cent		Poultry netting staples, discount 40 per cent.		10 per cent.	
Button imitation, per doz.	5 00 9 00	S. & D., discount 40 per cent.		STOCKS AND DIES.		Groanite or Pearl, Imperial, Crescent, discount	
German	0 60 80	Croscut, Disston's, per foot	0 35 0 55	American discount 25 per cent.		50, 10 and 10 per cent.	
PRESSED SPIKES.		S. & D., discount 35 per cent. on Nos. 2 and 3.		STONE.		Premier steel ware, 40 per cent.	
Discount 20 per cent.		Hack, complete, each	0 75 2 75	Washita	per lb. 0 28 0 60	"Star" decorated steel and decorated white,	
PULLEYS.		" frame only, each	0 50 1 25	Hindostan	" 0 06 0 07	25 per cent.	
Hothouse	per doz. 0 55 1 00	SASH WEIGHTS.		" slip	" 0 09 0 09	WIRE.	
Axle	" 0 22 0 33	Sectional, per 100 lb.	2 00 2 25	Labrador	" 0 13 0 15	Smooth Steel Wire.	
Screw	" 0 27 1 00	Solid	1 50 1 75	" Ate.	" 0 15 0 15	No. 9 gauge.	
Awning	" 0 35 2 50	Per lb.	0 28 0 30	Turkey	" 0 15 0 15	10 "	\$2 50
PUMPS.		SAW SETS.		Arkansas	" 1 50 1 50	11 "	6c extra.
Canadian cistern	1 80 3 60	Lincoln and Whiting	4 75	Water-of-Ayr	" 0 10 0 10	12 "	12c "
Canadian pitcher spout	1 40 2 10	Hand Sets. Perfect	4 00	Scythe	per gross 3 50 5 00	13 "	20c "
PUNCHES.		X-Cut Sets,	7 50	Grind, 2-in. 40 to 200 lb., per ton	25 00	14 "	30c "
Saddler's	per doz. 1 00 1 85	SCALES.		" under 40 lb., "	28 00	15 "	40c "
Conductors	" 3 00 15 00	Gurney Standard, 40 per cent.		" under 2 in. thick, "	29 00	16 "	55c "
Tinners, solid, per set	0 72	Gurney Champion, 50 per cent.		STOVEPIPES.		17 "	70c "
" hollow, per inch	1 00	Burrow, Stewart & Milne—		5 and 6 inch, per 100 lengths	7 00	Add 60c. for coppering and \$2 for tinning.	
RAKES.		Imperial Standard, discount 40 per cent.		7 inch.	7 50	Extra net per 100 lb.—Oiled wire 10c.,	
Wood	per doz. net 1 20 up	Weight Beams, discount 35 per cent.		ENAMELLED STOVE POLISH.		spring wire \$1.25, special hay baling wire 30c.,	
RAZORS.		Champion Scales, discount 50 per cent.		No. 4, 3 doz. in case, net cash	4 80	best steel wire 75c., bright soft drawn 15c.,	
Elliot's	per doz. 4 00 18 00	Fairbanks standard, discount 35 per cent.		No. 6, 3 doz. in case.	8 40	charcoal (extra quality) \$1.25, packed in casks	
Geo. Butler's & Co.'s	4 00 18 00	Dominion, discount 55 per cent.		TACKS, BRADS, ETC.		or cases 15c., bagging and papering 10c., 50	
Boker's	7 50 11 00	Richelieu, discount 55 per cent.		Carpet tacks, blue	80 and 15	and 100-lb. bundles 10c., in 25-lb. bundles	
" King Cutter	12 50 15 00	Warren's new Standard, discount 40 per cent.		" tinned.	80 and 20	15c., in 5 and 10-lb. bundles 25c., in 1-lb.	
Wade & Butcher's	3 60 10 00	" Champion, discount 50 per cent.		" (in kegs).	40	hanks, 50c., in 1-lb. hanks 75c., in 1-lb.	
Theile & Quack's	7 00 12 00	" Weight Beams, discount 35 per cent.		Cut tacks, blue, in dozens only	80	hanks \$1.	
Carbo Magnetic	15 00	SCREW DRIVERS.		" 4 weights	60	Fine Steel Wire, discount 25 per cent.	
Griffon Barber's Favorite	10 75	Sargent's	per doz. 0 65 1 00	Swedes cut tacks, blue and tinned—		List of extras: In 100-lb. lots: No. 17,	
Griffon No. 65	13 00	SCREEN DOORS.		In bulk.	80 and 10	\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—	
Griffon Safety Razors	13 50	Common doors, 2 or 3 panel, walnut		In dozens	75	No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No.	
Griffon Strapping Machines	13 50	stained, 4-in. style, per doz.	6 50	Swedes, upholsterers', bulk.	85, 12½ and 12½	24, \$8—No. 25, \$9—No. 26, \$9.50—No. 27,	
Lewis Bros. "Klean Kutter"	8 50 10 50	green stained, 4-in. style, per doz.	6 75	brush, blue and tinned	70	\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—	
REGISTERS.		Common doors, 2 or 3 panel, in natural		Swedes, gimp, blue, tinned and	75 and 12½	No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,	
Discount 40 per cent.		colors, oil finish, per dozen less.	8 75	Japanned	35	\$17. Extras net—tinned wire, Nos. 17-25,	
RIVETS AND BURKS.		3-in. style 20c. per dozen less.		Zinc tacks	35	\$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,	
Iron Rivets, black and tinned, discount 60 and		SCREWS.		Leather carpet tacks.	55	5c.—oiling 10c.—in 25-lb. bundles, 15c.—in 5	
10 per cent.		Wood, F. H., bright and steel, discount 87½		Copper tacks.	50	and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.	
Iron Burrs, discount 55 per cent.		per cent.		Copper nails	52½	—in 1-lb. hanks, 35c.—in 1-lb. hanks, 50c.—	
Extras on Iron Rivets in 1-lb. cartons, 1c.		Wood, R. H., bright, dis. 82½ per cent.		Trunk nails, black	65 and 5	packed in casks or cases, 15c.—bagging or	
per lb.		" F. H., brass, dis. 80 per cent.		Trunk nails, tinned	65 and 10	papering, 10c.	
Extras on Iron Rivets in 1-lb. cartons, 1c.		" R. H., dis. 75 per cent.		Clout nails, blue	65 and 5	Brass wire, discount 60 per cent. off the list.	
per lb.		" F. H., bronze, dis. 75 per cent.		Chair nails	35	Copper wire, discount 60 per cent. net cash	
Copper Rivets, with usual proportion burrs, 45		" R. H., dis. 70 per cent.		Patent brads	40	30 days, f.o.b. factory.	
per cent. discount. Cartons, 1c. per lb.		Drive Screws, dis. 87½ per cent.		Fine finishing	40	Galvanized wire, per 100 lb.—Nos. 4 and 5,	
extra, net.		Bench, wood, per doz. 3 25 4 00		Lining tacks, in papers.	10	\$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.15	
Copper Burrs only, discount 30 and 10 per cent.		iron	4 25 5 00	" in bulk.	15	—No. 9, \$2.55—No. 10, \$3.20 to \$3.20	
Extras on Tinned or Coppered Rivets, 1-lb.		Set, case hardened, dis. 60 per cent.		" solid heads, in bulk	75	—No. 11, \$3.25 to \$3.25—No. 12, \$2.65	
cartons, 1c. per lb.		Square Cap, dis. 50 and 5 per cent.		Saddle nails, in papers.	10	—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.	
RIVET SETS.		Hexagon Cap, dis. 45 per cent.		" in bulk.	15	15, \$4.30—No. 16, \$4.30. Base sizes, Nos.	
Canadian, discount 35 to 37½ per cent.		SCYTHES.		Tufting buttons, 22 line, in doz-	60	6 to 9, \$2.27½ f.o.b. Cleveland. In cartons	
ROPE, ETC.		Per doz. net.	6 00 9 00	ens only	60	12c. less.	
Sisal	0 11½	SCYTHE SNATHS.		Zinc glaziers' points	5	Clothes Line Wire, regular 7 strand, No. 17,	
Pure Manila	0 14½	Canadian, discount 40 per cent.		Double pointed tacks, papers	9 and 10	\$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow	
"British" Manila	0 12	SHEARS.		Clinch and duck rivets.	45	6 strand, No. 17, \$4.30; No. 18, \$2.70; No.	
Cotton, 3-16 inch and larger	0 20½	Bailey Cutlery Co., full nickled, discou		TAPE LINES.		19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,	
" 5-32 inch	0 25 0 27	and 2½ per cent.		English, ass skin, per doz.	2 75 5 00	Toronto, Montreal.	
" 1 inch	0 25 0 28	Bailey Cutlery, Japan Handles, discount 67½		English, Patent Leather	5 50 9 75	WIRE FENCING.	
Russia Deep Sea	0 16	per cent.		Chesterman's	0 90 2 85	Galvanized barb.	
Jute	0 09	Seymour's, discount 50 and 10 per cent.		" steel	0 80 8 00	Galvanized, plain twist	
Lath Yarn, single	0 10½	SHOVELS AND SPADES.		TINNERS' SNIPS.		Galvanized barb, f.o.b. Cleveland, \$2 55½	
" double	0 10½	Canadian, discount 45 per cent.		Per doz.	3 00 15 00	in less than carlots, and \$2 45 in carlots.	
Sisal bed cord, 48 feet	per doz 0 65	SINKS.		Tin case and dairy, discount 75 to 75 and 10		COILED SPRING WIRE.	
" 60 feet	0 80	Cast iron, 16 x 24	0 85	per cent.		High Carbon, No. 9	
" 72 feet	0 95	" 18 x 30	1 00	TRAPS (steel.)		No. 11	
RULES.		" 18 x 36	1 40	Game, Newhouse, discount 25 per cent.		No. 12	
Boxwood, discount 55 per cent.		SNAPS.		Game, H. & N., P. S. & W., 65 per cent.		WIRE CLOTH.	
Ivory, discount 37½ to 40 per cent.		Harness, German, discount 25 per cent.		Game, steel, 72½, 75 per cent.		Painted Screen, per 100 sq. ft., net.	
SAD IRONS.		Lock, Andrews	4 50 11 50	TROWELS.		Terms, 2 per cent. off 30 days.	
Mrs. Potts, No. 55, polished, per set	0 80	SOLDERING IRONS.		Disston's, discount 10 per cent.		WASHING MACHINES.	
No. 50, nickle-plated,	0 90	1, 1½-lb.	per lb. 0 37	German	4 75 6 00	Round, re-acting, per doz.	
Common, plain,	4 50	2-lb. or over	0 34	S. & D., discount 35 per cent.		Square	
plated	5 50	Iron, No. 493	per doz. 2 40 2 55	TWINES.		Eclipse, per doz.	
SAND AND EMERY PAPER.		No. 494	3 25 3 40	Bag, Russian	per lb. 0 27	Dowsell	
B. & A. sand, discount, 40 and 5 per cent.		Steel, discount 60 to 60 and 5 per cent.		Wrapping, cotton, 3-ply	0 24	New Century, per doz.	
Emery, discount 40 per cent.		Try and Bevel, discount 50 to 52½ per cent.		Mattress	per lb. 0 33 0 45	Connor Improved.	
Ornament (Rutten's) 5 to 10 per cent. advance		STAMPED WARE.		Staging	0 27 0 35	Daisy	
on list		Plain, discount 75 and 12½ per cent. off re-		VICES.		WRINGERS.	
		vised list.		Wright's	0 13½	Leader	
		Retinned, discount 75 per cent. off revised list.		Brooks	0 12½	per doz. 30 00	
				Pipe Vice, Hinge, No. 1	3 50	Royal Canadian	
				Saw Vice	4 50 9 00	" "	
				Columbia Hardware Co.		Sampson	
				Blacksmiths' (discount) 60 per cent.		Lightning	
				parallel (discount) 45 per cent.		Terms, 4 months, or 3 per cent. 30 days.	

CLASSIFIED LIST OF ADVERTISEMENTS.

Accountants and Auditors.

Barber, Henry & Co., Toronto.
 Fahy, Wm., Toronto.
 Hoskins, David, Toronto.
 Jenkins & Hardy, Toronto.
 Kidd, F. H., Toronto.
 Merson, Geo. O., Toronto.
 Williamson, T. G., Toronto.

Anvils

Taylor-Forbes Co., Guelph, Ont.

Art Glass

St. George, H. E., London, Ont.

Ash Sifter.

Cutts, C. M., & Co., Toronto Junction.

Axes, Hatchets, Scythes, etc.

American Axe and Tool Co., Montreal.
 Dundas Axe Works, Dundas, Ont.

Babbitt Metal.

Canada Metal Co., Toronto.
 Fairbanks Co., Montreal and Toronto.
 Langwell's, Montreal.
 Syracuse Smelting Works, Montreal.

Barriers, Solicitors, etc.

Atwater, Duclos & Chauvin, Montreal.
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 Hamilton, J. C., Toronto.
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 Dominion Belting Co., Hamilton.
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 Morrison, Jas., Brass Mfg. Co., Toronto.
 Nicklin, J., & Co., Birmingham, Eng.
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 Ives, H. R. Co., Montreal.
 Lamplough, F. W., & Co., Montreal.
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 Ormsby, A. B., & Co., Toronto.
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 Smith & Hemenway Co., New York.
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 Conn.
 Taylor-Forbes Co., Guelph, Ont.
 Wilcox Mfg. Co., London, Ont.

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 Penberthy Injector Co., Windsor.

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 Philip, David, Winnipeg.

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 Canada Metal Co., Toronto.
 Deseronto Iron Co., Deseronto, Ont.
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 Gilchrist, W., Pontardawe, Wales.
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 Leslie, A. C., & Co., Montreal.
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 Lysaght, John, Bristol, Eng.
 Morton, B. K., & Co., Sheffield, Eng.
 Nova Scotia Steel and Coal Co., New
 Glasgow, N.S.
 Peck Rolling Mills, Montreal.
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 Samuel, Benjamin & Co., Toronto.
 Summers, John, & Sons, Stalybridge, Eng.
 Thompson, B. & S. H. & Co., Montreal.

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Metallic Roofing Co., Toronto.
 Pedlar People, Oshawa, Ont.

Metal Polish, Emery Cloth, etc.

Falkner, H. F. Toronto.
 Oakley, John, & Sons, London, Eng.

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Milk Cans and Trimmings.

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 Robertson, James, Co., Toronto.
 Robertson, Thos., & Co., Montreal.
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 Toronto Foundry Co., Toronto.

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 Paterson Mfg. Co., Toronto & Montreal.
 Taylor-Forbes Co., Guelph, Ont.

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 Gurney Scale Co., Hamilton, Ont.
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 McNally & Co., Montreal.

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 Toronto Silver Plate Co., Toronto.
 Standard Silver Co., Toronto.

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Montreal Steel Works, Montreal.

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 Morton, B. K., & Co., Sheffield, Eng.
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Colonial Stock Food Co., Toronto.
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 Worthington Drug Co., Guelph, Ont.

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The James Smart Mfg. Co., Brockville, Ont., are now manufacturing a soft coal warm air generator, which is likely to "catch on," where soft coal is used in large proportion. In a pamphlet they have just issued they give the following information regarding this furnace :

"This heater is now being made in one size only, No. 18-21, with an 18 inch diameter grate and tapering firepot 21 inches diameter at top. Weight 1,700 lbs.

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"Fire Pot"—Made in two sections to prevent cracking. Heavy, deep, vertical corrugation on inside surface, providing spaces for air to pass between hot coals and side of pot.

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patented corrugated, cast iron, long, hollow sections so arranged as to form the combustion chamber above the firepot. The sections are arranged the same as in the hard coal Kelsey, excepting that two sections immediately at the back are dispensed with, in order to furnish an ample outlet for smoke. This construction is only second in area of heating surfaces and warm air capacity to the hard coal Kelsey.

"Direct and Indirect Draft—The arrangement of these drafts is a new and novel feature known to this heater only. There is only one opening to smoke pipe which is made to operate as both a direct or an indirect draft. The outlet for smoke is directly at back where two sections have been dispensed with, having a smoke pipe collar 10 inches in diameter. The indirect draft, unlike any other, has an up-draft. When back damper is open smoke and gas passes directly from combustion chamber to smoke pipe. When damper is closed they pass out through outlet and are forced to travel in both directions around the backs of flues below the

baffle-plates, then upward around end of baffle-plates to smoke outlet, thus securing a very long natural fire travel, with sufficient draft to burn soft coal to advantage.

"Clean-out Openings—These are located at each side of and at back of heater, permitting of the heater being thoroughly and easily cleaned at any time.

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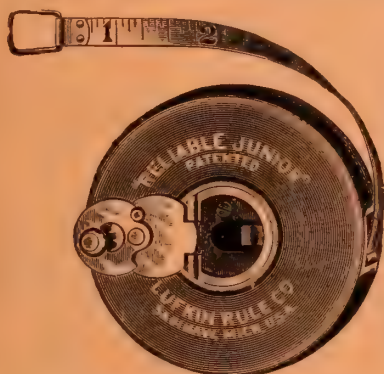
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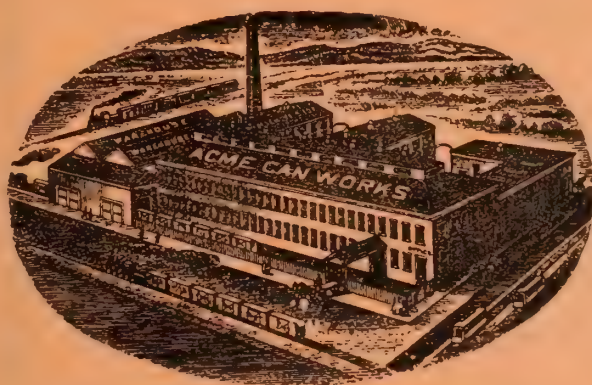
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All that is best in stove construction is embodied in the line of **Jewel Stoves and Ranges**. Made in every style and size—hundreds of varieties to meet all requirements in any part of the Dominion.

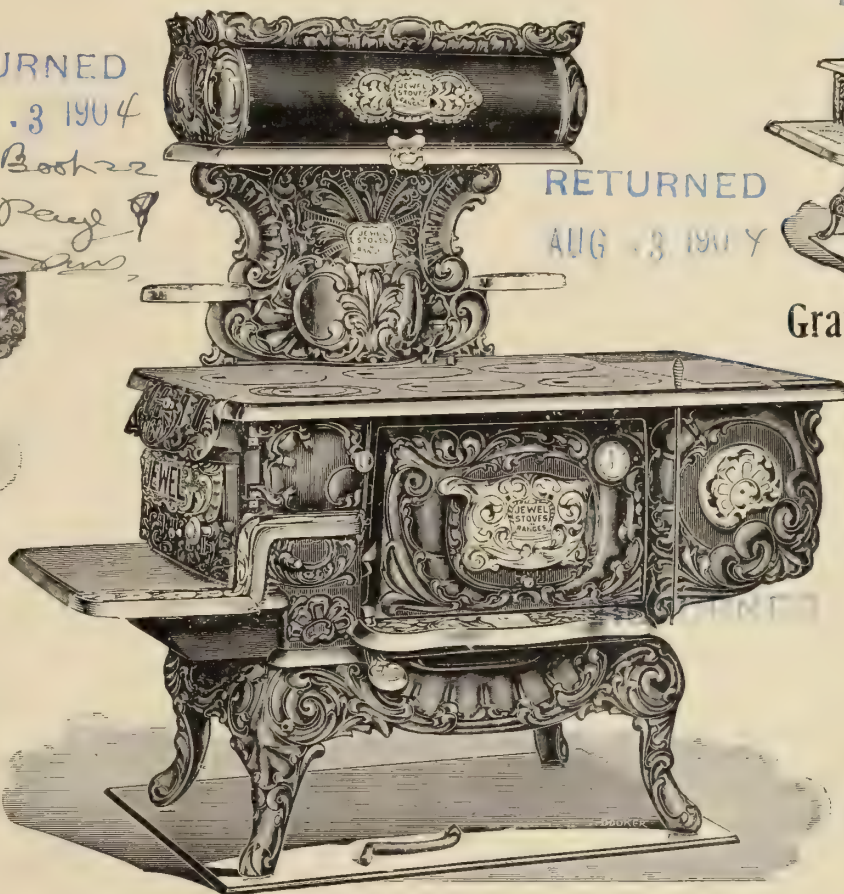


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We were the first in Canada to recognize the advantages of the use of **sheet steel** in the construction of Stoves and Ranges.

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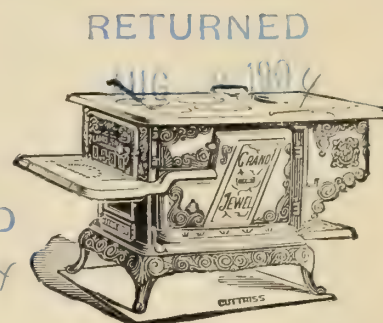
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No other range made anywhere excels the Dominion in appearance, design, construction or practical value as a cooking apparatus.



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Cast Iron with sheet steel oven. The **most successful stove** ever made.

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PLATE E-3.



PLATE E-4.



PLATE E-5.



PLATE E-6.

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VOL. XVI.

MONTREAL AND TORONTO, JULY 30, 1904.

NO. 31

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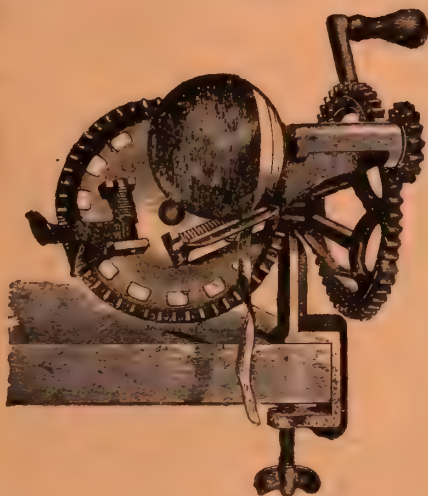
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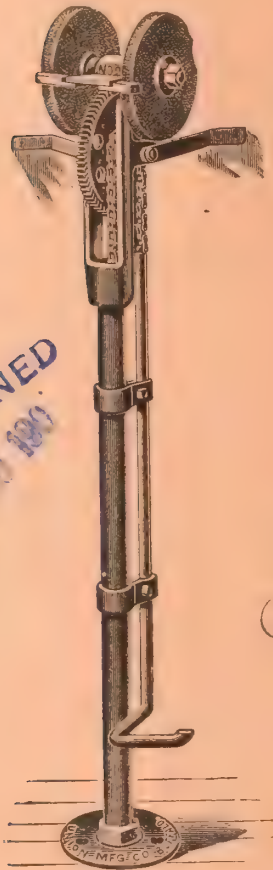
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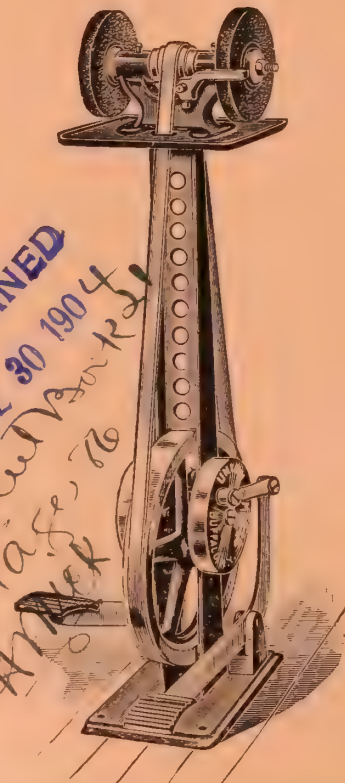
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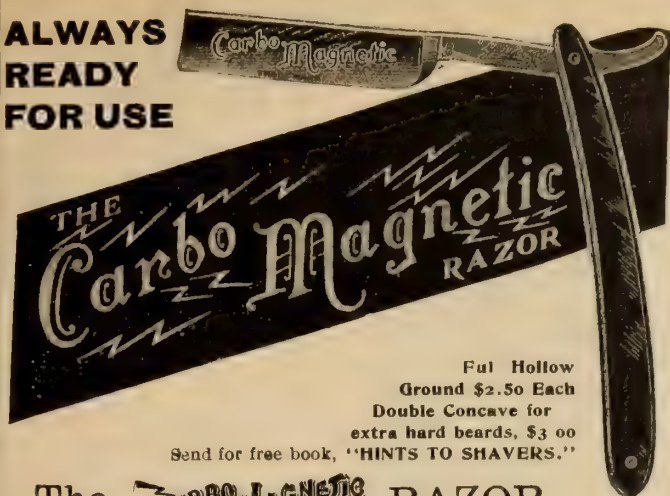


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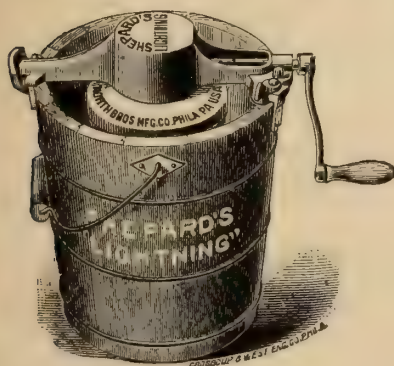
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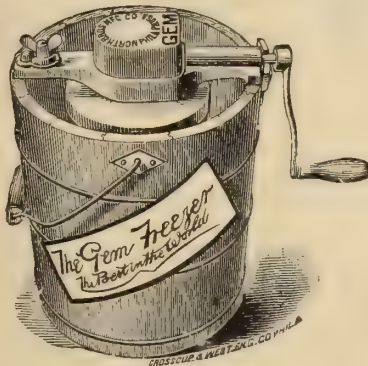
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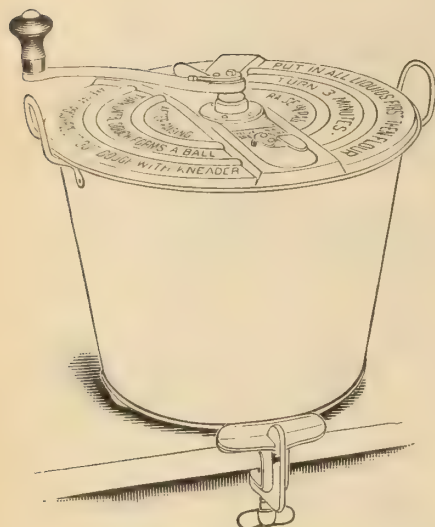
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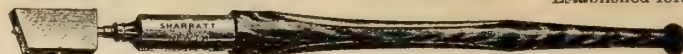
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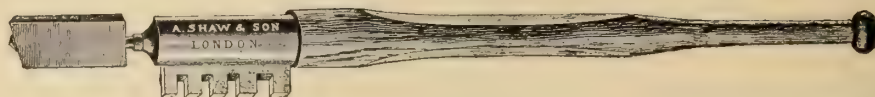
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Also made in "CLOSED RING," "OPEN RING"
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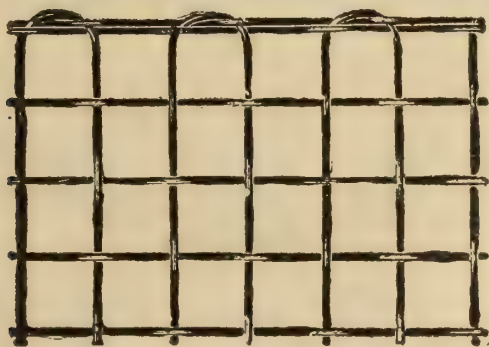
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rinse it, wipe it, and thor-
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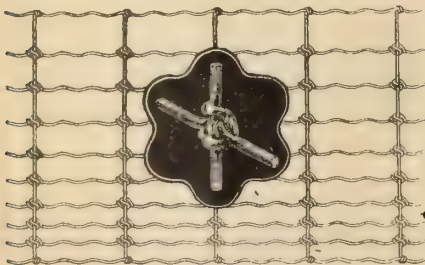
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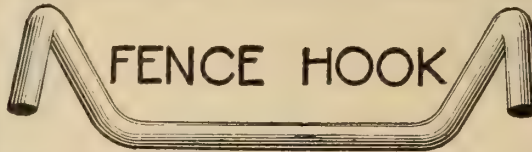
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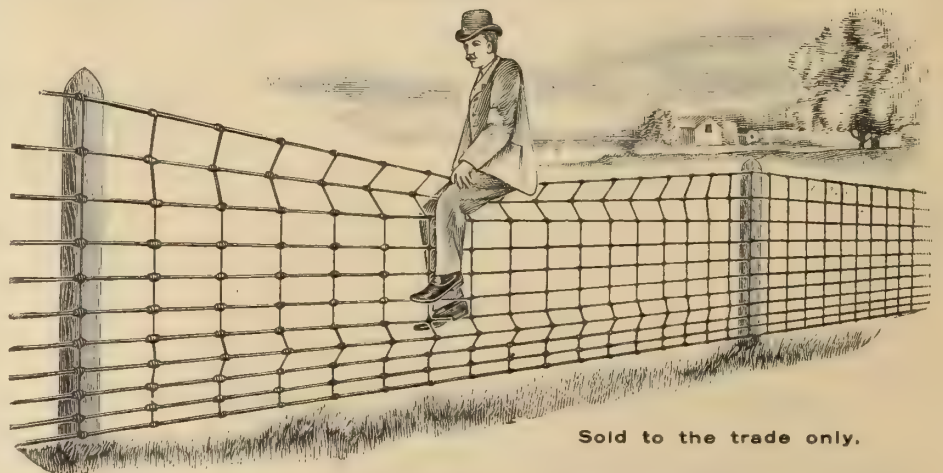
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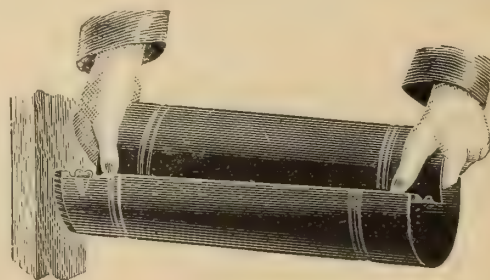
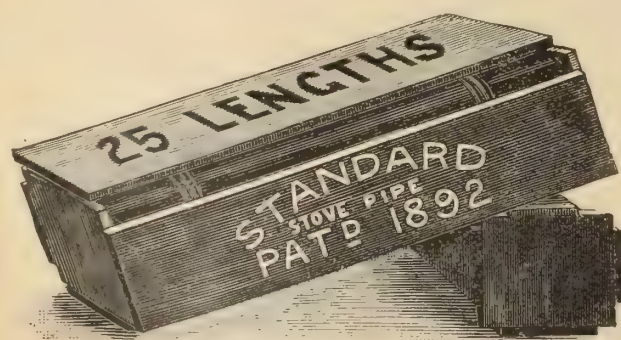
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Easily put together, requiring neither rivets nor tools
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CHAMBERLAIN AND HIS POLICY*

By George E. Drummond,
President of the Canadian Manufacturers' Association.

CANADA and Canadians owe no small part of the rapidly growing intelligent interest shown by Englishmen in things Canadian to the discussion of the great fiscal question projected into Imperial politics with such force by Mr. Chamberlain. Canada is looked upon, and rightly, as the pivotal point of the whole preferential question; so much so, indeed, that a false step at the present time on the part of our Canadian Government would mar, just as, on the other hand, a wise and statesmanlike endorsement by the Canadian Parliament of the principle of mutual preference in trade as needful for the thorough consolidation of the Empire, would, at this critical juncture, make for the safety of a measure the successful accomplishment of which will mean so much to the future welfare of Canada and the Empire.

During my stay in England, I had the opportunity of meeting some notable men, not only in financial and trade circles, but also in political circles; and I had an opportunity to obtain at first hand their views on the fiscal question. When I mention the names of such men as Sir Charles Dilke, Sir Wm. Holland, Sir Charles Renshaw, J. Hayes, Fisher, Lord Brassey, Hon. T. A. Brassey, Right Hon. James Parker Smith, Right Hon. Sir John Colomb, Mr. Wm. Farrer Ecroyd, the father of Fair Trade in England; Walter Runciman, Earl Grey, the Duke of Argyll, and last, but not least, Mr. Chamberlain himself, you will realize that I had an opportunity of ascertaining the views of strong political opponents as well as supporters of Mr. Chamberlain's great policy. I counted as the greatest privilege and pleasure that of meeting Mr. Chamberlain himself.

FULL OF VIGOR.

I found Mr. Chamberlain full of vigor, and full of confidence that the great cause for which he personally has sacrificed so much, will triumph in the end. I was immensely impressed with his sincerity and singleness of aim, namely, the firm and effective federation of our people the world

over, and the preservation of British interests (both labor and capital) against the unfair competition of foreign rivals, to which these interests are, under the present system of free imports, subjected. Mr. Chamberlain is fully convinced that the time has come for a reorganization of the Empire, and that the best, safest and surest way to effect a permanent consolidation of interests is through the medium of a mutual arrangement by which each section of the Empire will grant to the products of the other a preference as against the products of foreign labor. In this, Mr. Chamberlain's idea is exactly in accord with the view held and publicly expressed again and again by the boards of trade and chambers of commerce of Canada, a view that has been fully endorsed by the Canadian Manufacturers' Association.

NO SACRIFICE REQUIRED.

Mr. Chamberlain, in speaking to me on the subject, repudiated strongly the statement which has been made that he expects Canada, under a preferential arrangement, to sacrifice, or in the slightest degree to hinder or curtail, the fullest possible development of the industrial enterprises that we have already established, or may hereafter, establish.

Mr. Chamberlain's views are quite in accord with those held by the members of the Canadian Manufacturers' Association.

We believe that an effective, well-considered mutual arrangement may well be arrived at by which, while local interests in the United Kingdom and in the colonies can be fully and equitably safeguarded and kept prosperous, yet at the same time a very large trade that now goes to foreign and commercially antagonistic capital and labor can be diverted to our own people within the Empire.

This common sense policy must triumph in the end. Even among Mr. Chamberlain's strong political opponents there is already a sincere desire for a royal commission, representative of the colonies as well as the mother country, to consider the whole question.

As to Mr. Chamberlain's personality, no one can meet him without realizing that Mr. Chamberlain is in every sense a leader of men. He impresses you as a strong, safe, courageous statesman, who at the same time possesses in an unusual degree the best qualities of a clear-headed, practical business man, thorough in everything he does—surely just the man qualified to lead a commercial people in this commercially strenuous time.

HAS WORKINGMEN'S SUPPORT.

With respect to his sincerity of purpose in the present struggle, even his bitterest opponents, who are mostly among politicians and doctrinaires, admit that he has gone into the struggle from the highest and most patriotic motives. At the very zenith of his fame, he surrendered his position in a Cabinet in which, to use his own words, he had grown to love his work, and has voluntarily imposed upon himself, at an age when most men look for rest and quiet, a task which must in any event fill the best remaining years of his life with work of the most arduous nature. One cannot help but admire such a man, and his admirers are legion, especially in the Midlands of England. I believe that the workingmen will eventually rally to his support. A system that has resulted in bringing Campbell-Bannerman's twelve million British people to the point of starvation, is so clearly bad that even the cry of "dear loaf" will not long serve to keep the British workmen from supporting a statesman who has so well served their interests in the past as has Mr. Chamberlain.

Campbell - Bannerman's arguments have, in the Midlands of England, proved somewhat of a boomerang, and Mr. Chamberlain's cause has been very much strengthened in the minds of the practical people composing the population of that section of England. In this connection I am reminded of the advice given to Mr. Chamberlain's opponents recently by Mr. Geo. Senior, ex-lord mayor of Sheffield, and one of the

* Extract from a speech by Mr. Drummond delivered at a banquet tendered to him by the Canadian Manufacturers' Association in Montreal on July 21, 1904.

hardest headed business men in the Midlands of England. He said :

SCRIPTURAL AUTHORITY.

"We deplore the conditions that enable Campbell-Bannerman to state that twelve million British people are on the point of starvation. Does he wish to know the remedy? Let him refer to the XLI chapter of Genesis, 55th verse :

"And when all the land of Egypt was famished, the people cried unto Pharaoh for bread, and Pharaoh said unto all the Egyptians, go unto Joseph, what he saith to you, do."

The statute books of Britain must be a constant reminder to her workpeople that Joseph Chamberlain has proved their friend again and again. And, moreover, he knows them and their aspirations as no other public man in England knows them. I can well understand the truth of what has been said in this respect of Mr. Chamberlain, namely, that when he speaks to workmen or of them, they are real workmen, and when he discusses business, manufacturing or trade, he is understood by the classes whose interests are under consideration. The workmen of England know that such a man is not likely to father a policy calculated to injure their interests, and when the cobwebs of Cobdenism are brushed away, as they will be, they will realize, as Canadian workmen do, that it is of prime importance that the product of their labor should be safeguarded against the unfair competition of their foreign rivals.

CHARACTERISTICS.

As to Mr. Chamberlain's qualities as a statesman, and as showing his strength of character, Parker Smith, who, as you are aware, was his private secretary during the Boer war, told me that he learned to know Mr. Chamberlain under the stress and strain of that awful time, and learned to admire him above any man he ever met or hoped to meet. Cool, calm, under all circumstances, and full of courage, he is the very beau ideal of a British statesman.

Parker Smith related to me one anecdote that I shall never forget. Things had been going badly enough in South Africa, when, one night, came the tidings of the terrible disaster at Colenso; the guns lost, the army cut to pieces, Buller defeated. To Parker Smith fell the duty of carrying the news to Mr. Chamberlain. There was consternation among those present; only Mr. Chamberlain sat quiet.

Mr. Smith, turning to Mr. Chamberlain, asked : "Mr. Chamberlain, what

will happen if they drive us to the sea?"

"What will happen?" said Mr. Chamberlain; "what will happen? Why, we simply start over again. We will drive them back again."

That is the statesman who won out and kept Great Britain in the front rank, thus preserving the Empire. That is the statesman who, when the war was over, crossed to South Africa, met the Boer leaders, dealt fairly, squarely, and generously with them, and brought them into the Empire. He is the statesman who, sacrificing ease, comfort, and the emoluments of office, is fighting now for the consolidation of the Empire, and who every man in Canada, worthy of the name, should stand by.

And now, as to our duty in Canada in respect to the great question of preferential trade and its highest ultimate object, the binding together of the United Kingdom and her colonies in an Imperial alliance.

I am convinced from what I heard and saw in England, that the time has arrived when our Parliament should voice the wish of the Canadian people, as expressed by our trade organizations in every centre from Sydney and Halifax to Vancouver and Victoria; that the general interests demand that our Parliament should move to get a mutual preferential trade arrangement that will make for the permanent consolidation of the Empire.

I believe further that much of the opposition which Mr. Chamberlain is experiencing in Great Britain would be removed if our Canadian Parliament would now face the question of Canada contributing, in a Canadian way, and on the initiative of our own Parliament, to the naval defence of the Empire, a service which we now enjoy without the payment of a single cent. We owe it to our self-respect to do this. The delegates to the great chambers of commerce meeting held here last August, at which this association was fully represented, supported this principle by a unanimous and enthusiastic vote.

It is obviously unfair to expect the British tax-payer to continue paying the whole cost of a navy which guards Canadian tonnage and interests equally with those of the United Kingdom. A fair settlement of this question, a "clearing of the deck" so to speak, would, I believe, result in the removal of a good deal of the opposition which a portion of the general British public have, at first blush, shown to the idea of risking even a possible increase in the cost of living by placing a tax on foreign breadstuffs, so as to confer a preference on colonial products.

A COMPLIMENTARY BANQUET.

THE banquet to Mr. George E. Drummond, president of the Canadian Manufacturers' Association, given at the Canada Club, Montreal, was a unique affair. There were in attendance politicians of note from both parties. Race, creed, politics and nationality were all set aside and it was a gentlemen's banquet to one of Montreal's first gentlemen and in fact one of Canada's. The notable speeches were not made by ministers, but by business men, and notable among these were the terse utterances of Mr. Drummond himself. Mr. Robert Meighen, president of the Lake of the Woods Milling Co. and R. A. Donald, manager of the Pure Gold Mfg. Co., of Toronto, as well as Messrs. J. J. McGill, H. Cockshutt, R. M. Ballantyne and Robert Munro had some things to say and they all said them like level-headed business men who believed in the future of the Dominion.

LOWER PRICES IN WOODENWARE.

As a result of the additional protection afforded woodenware of Canadian manufacture by the increase in the duty on the foreign article entering this country, the United Factories of Toronto have been enabled to make a material reduction in woodenware quotations for the benefit of their customers. Here is an instance where increased protection has been in the best interests of the consumer.

ANNUAL MEETING OF MANUFACTURERS.

Mr. R. J. Younge, general secretary of the Canadian Manufacturers' Association, was in Montreal last week making arrangements for the annual meeting of the association, which is to be held on Sept. 20, 21 and 22. He believed that the meeting would be by far the largest in the history of the association.

**WIRE NAILS
TACKS
WIRE**

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Tapping Machine.

THE Lennox Machine Co., Marshalltown, Iowa, are sending out to the trade a small booklet illustrating and describing the Lennox Improved Tapping Machine. This company have just lately improved their works by the addition of a new machine shop, fitted with the most up-to-date machinery. This tapping machine will operate in any position on the water mains. After the machine is fastened on the mains, the tap can be made and the corporation cork inserted without taking any portion of the machine apart.

Canadian General Electric.

The Canadian General Electric Co., Toronto, are sending out a little booklet illustrating and describing the Swain Insulated Connector. It is intended for use where any electrical connection is made and broken frequently. It is particularly suited for use on electric cars, electric automobiles, etc., for connecting the motor leads to the leads from the wiring cables. In the same booklet is also described the Pinlock Connector.

"Efficient" Feed Water Heater.

Hardware and Metal has received from the Laurie Engine Co., Montreal, two little booklets, one illustrating and describing the "Efficient" Feed Water Heater and Purifier; and the other describing ring oiling, adjustable, ball and socket hangers, safety collars, and Shaw compression couplings. The description of the "Efficient" heater and purifier is one taken from the columns of **Hardware and Metal**, which was published some time ago.

A. W. Harris Oil Co.

The A. W. Harris Oil Co., Providence, R. I., are sending out a handsome booklet describing special petroleum lubricants. The booklet contains information which would no doubt prove of value to all engineers and those having charge of machinery of any kind.

Northern Motors.

The Northern Electric Mfg. Co., Madison, Wis., are sending out a little leaflet illustrating and describing their motors as applied to different kinds of blowers in blowing and ventilating service. Readers of **Hardware and Metal** may secure one of these upon application.

Feed Water Heater.

Thos. Organ, 821 Cherry street, Philadelphia, is sending out a booklet giving

a "Ten Minutes Talk on Prevention and Removal of Boiler Scale, by Organ's Water Purifier Feeding System." This is a chemical purifier. The talk is of interest, and engineers having trouble with boiler scale should secure one of these booklets.

Points on Grinding.

The Norton Emery Wheel Co., Worcester, Mass., are sending out to the trade a handsome little booklet containing "A Few Points on Grinding," a reprint from the *American Machinist*. Anyone wishing to gain some information on this subject would do well to apply to the company for a copy of this booklet.

Keystone Electric Co.

Hardware and Metal has received from the Keystone Electric Co. a catalogue illustrating and describing generators, motors and switchboards. This catalogue is a very handsome one, the illustrating and typographical execution being very clean and attractive. In this catalogue it has not been the idea to give a detailed description of the class

of machinery manufactured by them, but to let the trade know of the many classes of motors and generators they manufacture. The early part of the catalogue is devoted to generators. Then are illustrated their ordinary motors and also switchboards. Motors for special purposes, such as running individual machine tools, are then illustrated. Specifications of the different machines complete the catalogue. The Keystone Co. have also sent out Bulletin No. 4,001, giving a detailed description of the plant switchboard.

The "Acme."

The Acme Lathe & Products Co., Limited, Trafford Park, Manchester, Eng., have issued quite a handsome little booklet illustrating and describing the products manufactured by them. The booklet is indexed at the edge so that without a moment's delay the kind of goods looked for can be turned up. The company turn out screws and bolts of all kinds, washers and nuts, and studs. Readers of **Hardware and Metal** wishing to obtain one of these booklets should apply to the Acme Lathe & Products Co., Limited, mentioning this paper.

It's Quality that Counts in Varnish.

Quality is the first essential to success in varnish selling. Only quality counts in the end. It's the repeated sales that bring success.

The Sherwin-Williams Varnishes will bring a customer back again, and again, and yet again. They are "fine varnishes" in every respect.

Their quality creates confidence and confidence produces profit.

If you want most varnish business and greatest varnish profits write today for prices of *The Sherwin-Williams Varnishes*.



THE SHERWIN-WILLIAMS CO.

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CLEVELAND, NEW YORK, SAN FRANCISCO, MONTREAL,
CHICAGO, NEWARK, LOS ANGELES, TORONTO,
KANSAS CITY, BOSTON, SAN DIEGO, WINNIPEG,
MINNEAPOLIS, LONDON, ENG.

CANADIAN HEADQUARTERS AND FACTORIES

21 St. Antoine St., Montreal, Que.

1150

Business Changes

ONTARIO.

THE Canadian Incandescent Gas Lighting Co., Toronto, have assigned to J. P. Langley; meeting of creditors on 29th inst.

Geo. Ross, general merchant, Drumbo, has assigned to A. Robinson.

The business of A. Hyfield, harness-maker, Kirkfield, is advertised for sale.

W. H. Miller, general merchant, Severn Bridge, has advertised his business for sale.

The stock of the Suggett & Co. (estate), dealers in tinware, etc., Milton, has been sold.

H. R. Manders & Co., hardware dealers, Owen Sound, sustained loss by fire; loss is covered by insurance.

Joseph McCausland & Son, Limited, painters, etc., Toronto, sustained slight damage by fire; loss fully covered by insurance.

The Rogers Mfg. Co., manufacturers of mouldings, Toronto, have assigned to J. P. Langley; meeting of creditors on the 28th inst.

QUEBEC.

Camille Vincent, carriagemaker, Joliette, has assigned.

Oscar Cote & Cie., contractors, Montreal, have registered.

Bouthillier & Malouin, plasterers, Montreal, have dissolved.

The assets of J. Fisher & Co., general merchant, Jonquieres, are advertised to be sold.

Dominion Window Bolt & Latch Works, Montreal, have sold out to J. U. Carriere.

H. Lamarre has been appointed curator to J. L. Seguin, general merchant, St. Simon.

O. Daniels & Co., dealers in junk and scrap iron, Montreal, have dissolved partnership.

Marcus Finckelstein has registered under the style of Finckelstein Paper Box Mfg. Co., Montreal.

The assets of L. P. Lelletier, general merchant, Notre Dame Du Lac, were advertised to be sold on July 28.

A. Gauthier, W. Cole and W. Cote have registered under the style of Gauthier, Cote & Freres, general merchants, St. Cyrille.

The Montreal Plate Glass & Mirror Co., Limited, Montreal, have registered.

Jas. R. Kane, hardware dealer, Quebec, is dead.

MANITOBA AND N.W.T.

W. J. Robinson, general merchant, Erwood, has sold out to James L. Marshall.

Revillon Freres, general merchants and furriers, have been succeeded by Revillon Freres.

Wilkie & Co., general merchants, Fort Saskatchewan, have sold out to Kimball & Co.

Cochrane Trading Co., general merchants, Cochrane, have been succeeded by Howard & Chapman.

Charles Schack, dealer in lumber and implements, High River, has sold out to the High River Elevator & Lumber Co., Limited.

Lidgate & James, dealers in agricultural implements, Qu'Appelle, have been succeeded by Qu'Appelle Implement & Saddlery Co.

NOVA SCOTIA.

E. D. Smith, general merchant, Low-er Shag Harbor, has assigned to G. A. Black.

The sawmill of Henry M. Phinney, South Farmington, was destroyed by fire. No insurance.

BRITISH COLUMBIA.

D. S. Macdonald, general merchant, Northfield, is dead.

F. J. Bradley & Co., dealers in paints, etc., Nelson, is giving up business.

W. M. Lawrence, hardware dealer, Revelstoke, is to be succeeded by the Lawrence Hardware Co., Limited.

C. Bean, of J. E. Rogers & Co., general merchants, Fernie, has sold his interest in the business to J. E. Rogers.

NOTES OF THE TRADE.

A. McEdward, formerly of the firm of McEdward & Moore, hardware merchants, St. Catharines, Ont., will commence a new hardware business at 26 Queen street, St. Catharines, about the middle of August. Mr. McEdward was in Toronto on Tuesday to make some arrangements in connection with the starting of his business, and while there paid the office of the MacLean Publishing Co. a visit, in order to subscribe to Hardware and Metal, which paper he had seen every week when a partner in the firm of McEdward & Moore.

Mr. McEdward is anxious to have for reference the catalogues of the different firms catering to the hardware trade.

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Absolutely Safe
Accidental Discharge
Impossible

A Test that tells the story.
A Test that no other revolver will stand.

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Are Absolutely Safe.
Accidental Discharge impossible.
Which is a fact absolute and demonstrable.
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SAMPLE ROOM at 21 Scott Street (Telephone Main 4056)

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WHOLESALE.

Telephone,
Warehouse, Park 1585.

Where orders may be left if not convenient to visit our warehouse at Parkdale.

Neck Yoke Trimmings

End Irons.

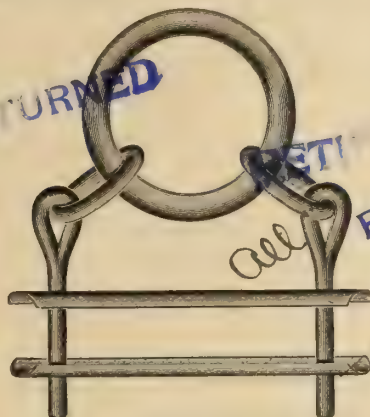


Malleable Ferrules,
Steel Ring.

Singletree Trimmings.



Welded Centre Clips,
with Ring.



Centre Irons, Welded Rings.

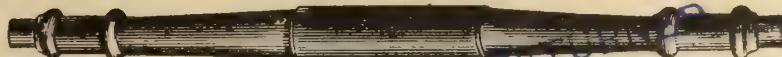
Singletree Trimmings.



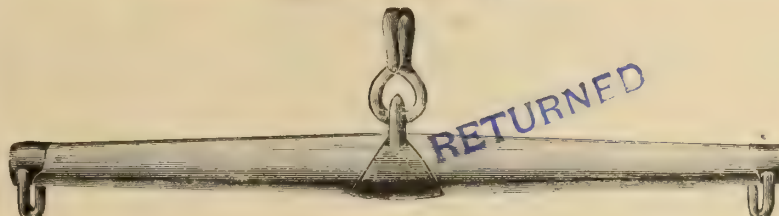
Malleable Ferrules,
Steel Ring.



Heavy Round Whiffletrees.



Heavy Team Neck Yokes.



Plow Whiffletrees, Ironed.

Singletree Trimmings.



Heavy
Malleable Ferrule,
Steel Hook.



Regular Waggon Singletrees, Iron d.



Waggon Neck Yoke, Ironed.



Grab hook.



Slide hook.

For other lines see our Hardware Catalogue.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

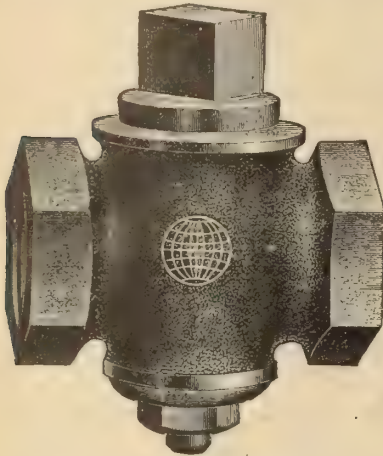
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Our prices are right.

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STEAM and GAS

COCKS.**"GUARANTEED SATISFACTORY."**

Catalogue "C" and Discount
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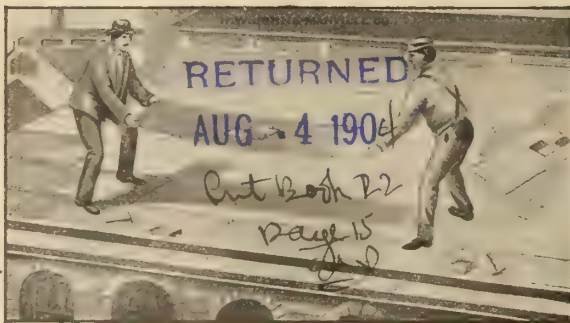
Polishers who use our corundum are obtaining most satisfactory results.

If you are interested we shall be pleased to send you samples and full information regarding our product. You can use it profitably.

Write for booklet and prices.

The Canada Corundum Company, Limited
TORONTO, CANADA.

ASBESTOS ROOFINGS



A Good and Profitable Line for the Hardware Dealer.

We represent the largest manufacturers of asbestos goods in America, and can supply anything in the line.

Asbestos Roofing is gaining daily in popular favor as it is light, strong, flexible, easily applied, and low in price. Composed of mineral sub-

stances, they are water, acid and vermin proof, contain no coal tar, wool nor shoddy, and are practically indestructible.

We have a proposition to submit to all hardware dealers in Canada. It will pay you to write us for samples and particulars. Write to-day.

THE FAIRBANKS CO.

MONTREAL

TORONTO

VANCOUVER

WINNIPEG

MACHINERY

MACHINERY MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street.
Montreal, July 28, 1904

A MARKED quietness is at present the feature of the machinery market in this province. On the whole there is little machinery moving, although some dealers claim a fairly good business in machine tools and supplies. A few boilers and engines have been installed, and a small amount of wood working machinery ordered.

The most important event in machinery circles this week is the anticipation of a large shop equipment order. The matter is still in abeyance, but it is expected that the deal will be closed this week.

Electrical machinery cannot be said to be active, although a fair amount of business is reported, while supplies are moving unusually well.

Ontario.

Office of HARDWARE AND METAL,
10 Front Street, East.
Toronto, July 29, 1904.

Conditions on this market do not show any change this week. There have been no large orders placed with local dealers, although the ordinary run of business has been done. Some dealers report ordinary business very good this week.

Inquiries for wood-working machinery and boilers and engines have been fairly numerous. Not so many inquiries for iron-working machinery have been received.

Rife Water Engine.

A subscriber has sent in an inquiry to Hardware and Metal for the name of the makers of the "Rife Water Engine." Can any of our readers furnish us with this information? Please have communications addressed to machinery editor, Hardware and Metal.—Machinery Editor.

Watchman's Clock.

AN illustration is shown of an Imhauser Improved Watchman's Time Detector. A clock of this kind is almost essential in any place

where a watchman is employed, as it guarantees that the watchman systematically visits every part of the premises at frequent intervals.

During the day time hundreds of eyes guard people's property, and in addition, the ever vigilant and watchful eye of the master is in evidence to see that all is as it should be, but at night one man has sole charge of the premises. No one is watching this man. One must realize the fact that a watchman occupies a position of more responsibility than does a superintendent, and his position, as far as importance goes, is second to none in the establishment. Some watchmen are honest, and again many of them are unreliable. One of these clocks will show whether the watchman is worthy of the trust imposed in him. Many an incipient fire has been arrested



Imhauser Time Detector.

by the faithful watchman who is at his post. Besides this, fire insurance companies are willing to lessen the insurance on a place that is watched.

The case is turned from solid brass. The works fully jewelled, with chronometer adjustment to heat and cold and position, are covered with a tightly fitting dust-proof cap, as in high priced English watches, the outer case being fitted with a safety knife blade lock attachment, by the operation of which the dial will be cut each time the clock has been opened or closed. This renders tampering with the clock impossible. The single stamping spring for marking the watchman's record is made from the finest tempered steel, forged specially for this purpose, and is placed in the cover, and acts entirely independent of the watch movement.

The single stamping spring recording device is one of the many distinctive features of this Detector. All competing watches are operated by a set of small springs, each separate spring registering for a station. These springs in competing watches rust easily, and adhering together, mark all stations at once, hence are unreliable and worthless.

This line is handled by A. Rubbra, at Machinery Exchange, Montreal.

Machinery and Electrical Notes.

The contract for the construction of the Singer Sewing Machine shops at St. Johns has been secured by Jas. Stewart and F. S. Bancroft, New York.

A large fire box locomotive boiler, drawn by three teams, attracted considerable attention on the streets of Montreal this week. It was being taken to the stone quarry at Long Point, of Peter Lyall & Sons, from the Machinery Exchange, Victoria square.

A complete outfit of wood-working machinery has just been installed by the Fairbanks Co., in the L. C. Masson sash and door factory, Delorimier avenue and Craig street, Montreal. Their factory was burned down lately, but the firm have rebuilt and are now in running order.

Plans are being prepared for a new foundry for the Ottawa Steel Castings Co., Ottawa, to be erected on Bridge street, adjoining the present one. The new structure will be a building about eighty feet square and one storey in height. Its equipment will give a daily output of five tons. Employment will be furnished in the new foundry to forty or fifty men.

A. E. Osler, representing the Niagara Power Commission, while in Galt recently obtaining information relative to the probable demand for electrical power there, found that there was a keen demand for electrical power among the smaller manufacturing concerns, while the plan was received with equal favor among the larger manufacturers, providing the cost of electricity competed successfully with the cost of producing steam power.

Suggestions from American Foundrymen.

EXTRACTS FROM PAPERS AT THE NINTH ANNUAL CONVENTION OF THE AMERICAN FOUNDRYMEN'S ASSOCIATION.

"PIG IRON AND ITS CONSTITUENT ELEMENTS."

By H. L. Williams, Chicago, Ill.

"We find pig iron and castings made up in the main of metallic iron, carbon, silicon, sulphur, phosphorus and manganese; the other elements, such as titanium, copper, arsenic, etc., seldom being important enough to cause trouble.

"Metallic iron runs 92 to 94 per cent. in our foundry and mill irons. It is the same whether in pig iron, steel, wrought iron, castings, etc. Were it alone to be considered we need not worry about grading by fracture or analysis. We must look for the differences that occur in the various classes of irons, in the additional elements present. To control these foreign elements is the task of the founder.

"Carbon is most important in cast iron. Its effect on iron is positive and varied. Free carbon, or graphite, may be either in the pig iron between the crystals or, if in considerable excess, leave the iron at the moment of set and fly off as "kish." Combined carbon, or the carbon which remains in combination with the iron, is the hardening substance in iron, and when all the carbon is present in that state leaves it perfectly white. This is turned to practical account in making chilled castings, the effect of a sudden cooling of iron by throwing into water or casting against a heavy body of cold iron promoting the retention of the carbon in the combined state. In this way car wheels, crusher work, rolls and the like are made, with iron otherwise gray if left to cool slowly. If a casting is too hard a correction must be sought in freeing more of the carbon and getting it into the graphitic state in subsequent castings. Hence softness and hardness of iron in foundry work is chiefly controlled by carbon.

"Silicon in iron frees the carbon, depending upon the amount present, the shape and weight of the casting and the pouring temperature. In other words, the rate of cooling. If the iron is high in combined carbon and hard, add silicon to soften it. It will do this unless prevented by too much sulphur, phosphorus or manganese. If the iron is too soft, reduce the silicon. If the iron is too hard and low in total carbon, too much silicon is not good, as it

is only effective through its action on carbon.

"More silicon is required in thin castings than in heavy ones, as the latter cool slower and give the carbon time to separate out, while the former, cooling quickly, chill more and keep the carbon in combination.

"Manganese increases the affinity of iron for carbon. In heavy castings it is well to have 0.80 per cent. and in light work only 0.50. With these proportions the metal will be clean and strong. Below 0.50 the metal is inclined to sponginess and above 0.80 there is a chance for hard iron. Manganese also reduces the sulphur present. In chilling work high manganese gives a strong, hard, sharp chill. It can be used up to 3 per cent. in such mixtures.

"Phosphorus increases fluidity, corrects shrinkage, and is desirable in the foundry up to 0.50 for ordinary foundry castings and up to 1.25 for ornamental products. Phosphorus hardens iron, and very much of it requires plenty of silicon to neutralize the effect. Excessive phosphorus with low silicon makes bad foundry work.

"Sulphur combines carbon erratically, causing hardness, closing the grain and weakening the castings. In ordinary castings it should not exceed 0.09, but may go above this in common work requiring no machining. It is the great enemy of iron and should be kept out as much as possible. The fuel is a fruitful source of sulphur, hence this should be watched.

"It will be noticed that silicon opens the grain of iron by freeing the carbon, while all the other elements close it by retaining the carbon in combination. In these effects we find the relation of grading by fracture and chemical analysis."

"PATTERN MAKING AND ITS RELATION TO FOUNDRY COST."

By W. H. Parry, Brooklyn, N.Y.

"When we consider that a molder is compelled to make castings with practically no more means to a successful end than a box or two plus a pile of sand, it is wonderful indeed in these days of keen competition that castings can be made commercially profitable. The all too common practice of sending an order for hundreds of castings from one small pattern to be delivered in a day or two is still with us. The loam molder who is fortunate enough to be provided with all the loose pieces necessary to complete his mold is in luck,

and how often does it occur that when the loose pieces are furnished, they do not come within a reasonable distance from his sweeps, or project inward or outward enough to necessitate amputation.

"Another fruitful method of increasing foundry costs in connection with loam work is the growing disinclination to make the necessary core boxes, so shaped as to perfectly match the main loam core. The excuse is advanced that there are chippers employed in the foundry for this work. This procedure is the rankest kind of heresy, and not fair to the foundryman or the molder who is making his best efforts to cheapen the cost of castings.

"Unvarnished patterns with glue joints improperly made, or with daubs and beads of glue sticking out, especially in corners where the lift is greatest, are to be condemned. The use of cheap varnish is to be deprecated for all patterns, the more so on the larger ones that are apt to be left in the sand over night. It entails extra work on the molder in mending the mold, due to the glue cozing through the fresh varnish.

"The making of large patterns in sections so that each part can be drawn from the sand independent of its neighbor is very often a great help to the sand artist, and if it is possible to do away with deep cope lifts through the medium of suspended cores in the cope, so much the better for the foundry and pattern shop, in many instances.

"Again, large or small patterns that are slapped together any old way by men who know better than to expect a pattern to be drawn from the sand without any draft is very bad practice. It has been my 'privilege' many a time to have witnessed good molders attempting to make presentable castings from such patterns, only to have them returned as not being 'true to pattern.' One case in particular may be mentioned. A cement mill hopper frame some thirteen feet in length, by a width and depth of some six feet or so, was constructed with so little regard to the molder's feelings that casting after casting was lost, until, through the insistent demand of the foundry boss, a few inexpensive core boxes were made, which allowed the piece to be cast successfully and with less trouble and expense.

"The placing of fillets on core prints, where they join the pattern, to avoid a 'crush' is good practice, and should be universally adopted, at least where

cores of great bulk rest thereon. While it increases the chipper's work it decreases the chance for lost castings.

"On complicated core work time and castings can be saved by having the set of cores made strongly wired without any attention being paid to venting them, and sent to the pattern shop, or any other suitable place, to be assembled on core jigs of wood. Any error can thus be detected and core boxes or core prints corrected while the concrete evidence of errors is present. When the object of these trial sets is explained to the foundryman he will always be willing to provide them, as it lets him out of a lot of trouble."

Care of Pneumatic Tools.

PNEUMATIC tools should be thoroughly and systematically cleaned.

These tools are necessarily of a very high grade of workmanship, and while they are built for rough, hard work, they should receive the best of care in order to keep them in good working order. The Philadelphia Pneumatic Tool Co., in a neat little booklet, make some suggestions about the methods to be employed in the care of pneumatic tools.

HAMMERS.

Particularly should chipping hammers in foundries receive attention, for the reason that there they are subject to the cutting action of sand and dirt. In all kinds of work where chipping and riveting hammers are in constant use they should be taken apart, soaked in benzine and thoroughly "blown out" with air pressure once a day. It should be made sure that all the holes in the valve and cylinder are free from scale or dirt. It is a good device to allow the hammers to stand over night, handle end down, in coal oil. They are then dipped in benzine, "blown out" and oiled.

DRILLS.

Drills should be cleaned with coal oil and benzine, pouring same in through the handles as well as through the oil cock, and blowing out thoroughly with air pressure. To ensure long life the drill should be taken apart, say twice a month, and every part thoroughly cleaned. In reassembling the drill care should be taken to have all screws and nuts drawn up tight. The ball bearings should be carefully adjusted and locked with the nuts provided for that purpose.

RAMMERS.

Although not subject to the severe service that chipping hammers are, rammers are liable to get sand into their

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MACHINE TOOLS for prompt delivery—Planers, shapers, lathes, drills, bolt cutters, milling machines, punches and shears; also, full line of machinists' supplies. Good second-hand machinery taken in exchange. Show room open 7 a.m. to 11 p.m. H. W. Petrie, Toronto.

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ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

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A CHANCE for practical machinists, shop and tools for sale or rent; central location; three lathes, swing two feet, sixteen and twelve inches; iron planer, 24x24x6 feet; one large and one four-spindle drill; emery jack and other tools; motor power and dynamo for lighting; immediate possession. John Rodger, Hamilton.

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MACHINE SHOP and moulding shop for sale; some of the machinery nearly new; business will be sold as a going concern. T. R. Atkinson, Simcoe, Ont.

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AT TWO or three good, steady men wanted for general foundry work. Apply Moffat Stove Co., Limited, Weston.

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MACHINE hand, one used to moulding machine for cabinet factory; steady work for first class man. Apply to The Burton Manufacturing Co., Limited, Hamilton, Ont.

working parts, and therefore it is essential that they be cleaned much in the same way that chipping hammers are.

OILING.

All pneumatic tools when in use should be oiled once every hour with light oil. Heavy oil should never be used for the reason that the expansion of the air in the tool lowers the temperature, and thus ordinary heavy oil becomes thick and gummy. Of course that interferes with the free movement of the parts, besides blocking up the small air ports.

It is impossible to provide a satisfactory oiling device on a pneumatic hammer, because of the incessant vibration of the tool. It is therefore necessary to disconnect the hose from the hammer and oil through the air inlet. When doing this the thumb lever should be pressed and the hammer held in such a position that the oil will flow into the valve and all other parts of the tool. Occasional oiling inside the nose piece of the riveting hammer will make the tool work more satisfactorily.

On drills an oil cock is attached. When the tool is new it should be oiled once an hour, but afterwards six times a day will be found sufficient. Drills should also be oiled through the throttle handle once a day.

Rammers have to be oiled in the same way that chipping hammers are, and it should be done once per hour.

AIR STRAINERS.

Most pneumatic tools are provided with an air strainer, and all should be. At times these strainers become clogged, which state of affairs can be told by the losing of power by the tool. In such cases the "strainer nipple" should be removed and the strainer cleaned by a backward blow of air. The air strainer on the drill is inside the throttle handle, and to clean it the entire handle has to be removed.

USING PNEUMATIC TOOLS.

The first and most important point is to see that the tool gets a full supply of air at a pressure of from 80 to 100 lbs. per square inch at the tool. Here the importance of having the supply pipe of a diameter fitted to supply the required amount of air at the given pressure is recognized.

Chipping and riveting hammers should be firmly held against the chisel or rivet set. These latter should not be allowed to play in and out when the hammers are in operation. Every blow of the piston in a chipping hammer should be delivered upon the end of the chisel, and none upon the shoulder in the forward end of the cylinder. It is impossible to protect this shoulder with

an air cushion, but if the tool is held properly up against its work there will be no trouble from this source. If these directions are followed by the operator there will be less jar to his arm than otherwise.

It is very important that chisel and rivet sets should fit properly in their sockets; otherwise the air will escape from the forward end of the cylinder around the tool shank, and thus power will be lost. The nose piece of a riveting hammer should also be kept screwed up tight.

In case the piston binds in the cylinder the piston should not be ground, but the burr scraped from the inside of the cylinder. The binding is nearly always caused by the pressure of foreign matter.

Rivet dies or "button sets" should never be allowed to become over-heated. They should be changed occasionally or cooled by plunging them into water. Otherwise the temper in the shank will be drawn.

A sand rammer should not be held at arm's length, with stiff elbows. It should be held as lightly as possible in the open fingers, with bent elbows. The tool will be found to practically support itself when running, and it will only be necessary for the operator to guide it about the work. A little practice will indicate the proper distance to hold the tool above the work, so as to get the best results.

BRANDING NAILS.

WHEN asked concerning his opinion on this subject by a representative of Hardware and Metal, Wm. Smaill, of the Canada Horse Nail Co., said:

"No doubt the present system is Archaic and entirely out of date. It was established, as is well known, when nails were hand-forged; and at that time expressed a ratio of weight to number, but now has no meaning. Of course people in the trade know the nails by their present terms, and the survival of the method is interesting and does no harm."

T. Esmond Peck, manager of the Peck Rolling Mills, said that he saw no particular reason for making any change, as the custom was an old established one and no one was suffering in any degree therefrom. He did not know that there was any great desire on the part of the trade to have it changed, and until he saw the letter a short time ago in Hardware and Metal he did not think there was any feeling whatever on the subject.

J. R. Kinghorn, general sales agent of the Montreal Rolling Mills, could see no

reason for making any fuss about the custom. He knew that it was not as handy as it might be, but the matter was perfectly understood by the trade in general. Some day the manufacturers might get together and agree to a change if it could be arranged satisfactorily to all concerned.

RELATION OF EMPLOYER AND CLERK.

Editor of Hardware and Metal:

For a long time past I have noticed the indifference existing between the employer and the employed, and I think the sooner this feeling is wiped out the better it will be for the business, the employer, and the employee.

Most business men of to-day hold aloof from their clerks, which is rather detrimental to the business.

The clerk, who has actually more to do with the business in serving the public than the employer, could in no small way advise a merchant, who probably very seldom waits on a customer, which grade of goods it pays him best to handle.

The merchant who calls his clerks around him and instructs them, and talks matters of interest to the business over with them, will in the long run be the most successful in business. Such a merchant is training his clerks; he is placing confidence in them and they know it; and they will try all the more to keep his confidence by doing well what they have to do.

Every business man should have his clerks talk frankly with him, and discuss trade and other business matters.

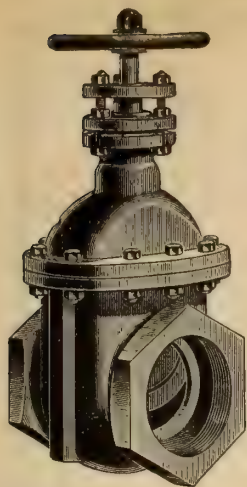
When a clerk has the confidence of his employer he is always working for his employer's interest, because he knows his work is appreciated by his employer. When, however, this is not the case, there are murmurings always going on among the employees.

Let me say to the hardware merchants, first secure the confidence of your clerks, then you can leave them and know the work is going on as well as though you were there.

If there are any changes to be made in arranging the stock consult your clerks. Probably they can give you suggestions that would not occur to you. Even if they cannot improve upon your plan you are at least showing them that you value their opinion.

I know what it is. I once worked for a man I feared, and although I did my level best I was always afraid I did not do enough work for him. But now, since circumstances have altered my case, I feel that work is not to be looked upon with dread but as a pleasant duty.

R. F. B.



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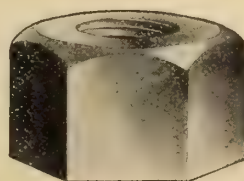
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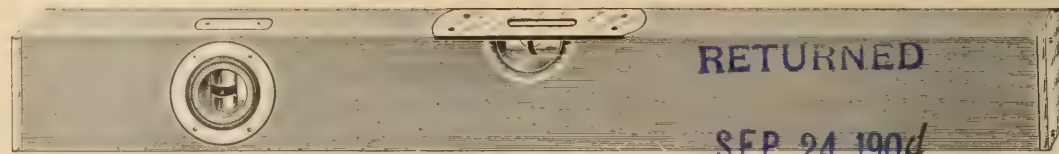
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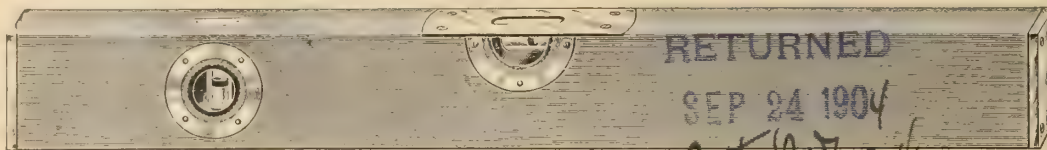
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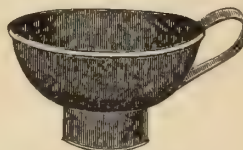
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PLUMBERS' CONVENTION.

LAST week the ninth annual convention of the National Master Plumbers' Association of Canada was held in Toronto, and now the question naturally arises: What was accomplished during the three days' stay of the delegates in Toronto?

One circumstance at the outset is noteworthy—it was a national convention. There were delegates present from all over Canada. The provincial association of Ontario was represented by delegates from Toronto, Galt, Stratford, Hamilton, Barrie, Ingersoll and St. Catharines, and the local association at Winnipeg, Montreal, Perth, Halifax, Guelph, Ottawa, Toronto and London were also represented. In the national character of the convention lay one of the strongest titles to the confidence and respect of the craft throughout Canada.

Notwithstanding the importance of the business transacted at the various sessions of the convention, the entire value of the gathering did not result

therefrom. The plumbers from the different parts of the Dominion were thrown together socially for three days. During that time a feeling of intimacy naturally sprang up. Ideas were interchanged and problems discussed. Thus one of the most important results of the convention was the binding of the trade closer together.

The plumbing trade of to-day is based on science, so that there are many problems of a practical nature to be handled. At the convention there was an opportunity for the discussion of such problems both in and out of the business sessions. Naturally the most good would result from a discussion in session, but unfortunately the lack of time was very often prohibitive.

Robert Ross, president of the association for 1904-05, in his report as vice-president, advocated triennial meetings of the association instead of annual meetings, as at present. There is a great deal to be said in favor of this proposal. There would in the first place be more time for a detailed discussion of business questions, and in addition an opportunity would be afforded for taking up technical problems, and also for the reading of technical papers.

Difficulties are met with in the plumbing trade quite as much as in the machinist's or foundryman's trade. At conventions of machinists and foundrymen one of the most important features is the reading of technical papers, specially prepared by some of the members, and the discussing of problems of interest to the trade. If these two trades find it of advantage to spend time in this way there is no reason why the plumbers should not also.

The report of the apprenticeship committee this year was of considerable importance, and calls for some action on the part of the association, as well as on the part of each individual master and journeyman plumber.

The apprentice question is a problem in all trades, more or less. Especially is this the case at the present time in the plumbing trade. It is a problem now, and a hard problem to solve because it has been neglected in the past. Now is the time for the plumbers to deal with it, while it is yet in its in-

fancy. The following extracts from the report of the apprenticeship committee gives the details of the situation:

"As it stands to-day, the majority of boys spend three or four years waiting on the journeyman plumber and then begin to realize that they know nothing about the trade. They then leave to try some other calling, thereby losing three or four of the most valuable years of their life.

"Speaking from experience, not one boy in ten learns the plumbing business, and we think it's the master plumber who should find the reason why, as he seems to be directly responsible to the parents for the advancement of the boys whom he takes to learn the plumbing business."

The apprentice of to-day may be the master plumber of to-morrow. If the master plumber of to-day honors his trade, he will wish to see it advance as the years go by. The trade cannot develop without developers. The apprentice is the future developer. Therefore the plumber that takes an unselfish interest in his trade will take an unselfish interest in his apprentices.

It will be his desire that they become competent plumbers and, that being the case, he will not stint a little time now and then to give them a practical lesson. He will not forget to let them have the reading of all technical literature that comes to the place. To such a plumber the apprentice is not a servant, but a helper and learner. To a certain extent the plumber will be teacher.

For the present good of the association a more perfect organization is necessary. The efforts being made by the association to perfect the organization are worthy of the cause. The aim is to get all the provinces to organize as Ontario has done. The need of such organizations is quite apparent. Certain conditions are different in each province. The provincial associations can handle at their conventions business which is of particular interest to their own province, while the questions of general interest can, upon discussion, be passed on to the national association for consideration at the national convention.

AN UNFORTUNATE INCIDENT.

MR. R. BACON, a graduate of Harvard University and a member of the American Society of Civil Engineers, has been arrested at Port Arthur, on the charge of having violated the Alien Labor Law of Canada. Mr. Bacon entered Canada under a written contract with Mr. J. R. Stephens, chief engineer of the Grand Trunk Pacific Railway, to assume the position of harbor expert for the railway at Port Arthur. The arrest is one of the first results of the agitation, which has been general throughout the country, looking towards the exclusive employment of Canadian engineers in such construction works as the building of the G. T. P.

The action taken by the solicitor-general in ordering the arrest of so prominent a man as Mr. Bacon is certainly a most serious step. It will be heard of through the length and breadth of Mr. Bacon's native land, and will assuredly arouse prejudice of an unpleasant character. Possibly the parties responsible for the arrest were not sensible of what the result would be.

If there is one thing the people of the United States have been generous in, it has been the recognition of talent among our professional men. There are few American universities in which Canadians do not hold positions on the staff, and a man has but to do tolerably well in a Canadian university to be welcomed on the other side of the line. The same is true of graduates in medicine, law and applied science, who are all represented in the various centres of the United States. Frequently the only possible openings for young Canadians of brains are to be found there.

By the short-sighted policy of driving out American engineers from Canada, a great injury will be done to this beneficial sentiment in the United States. Can Canada afford at this juncture to incur the prejudices of American professional men? Would it be wise at any time? Assuredly not.

Canada must never allow herself to become so prejudiced and hide-bound that she cannot welcome men of brains to her shores, whatever section of the world they come from. Then she can consci-

entiously demand equal consideration for her sons wherever they may go.

We do not deny that there has been extreme provocation in the present instance. Mr. Stephens went about hiring engineers for the G. T. P. in a bull-headed way. He evidently took the ground that it was nobody else's business but his own, and that he would engage whom he pleased. This was certainly not the proper course. The G. T. P. is as near being a national work as anything we can name, and it was Mr. Stephens' business to steer a politic course and let Canadians build the line, as far as it was possible. Then, where competent Canadian engineers were not available it would have been perfectly justifiable for him to have accepted the services of competent Americans.

Prior to the arrest of Mr. Bacon, the feeling in certain parts of the United States was exhibiting a tendency to become antagonistic to Canadians. The experiences of several young Canadians were unpleasant,—a circumstance directly due to the unfortunate agitation in Canada against the American engineers. If the antagonism was noticeable before any action was taken to deport these engineers, it is natural to conclude that it will be many times as strong, now that an American has been arrested.

COMPETENT PLUMBERS.

COMPETENCY in those actively engaged in any business or profession is the best assurance of a high state of perfection in that branch. The men who know their business thoroughly and intelligently will not only advance themselves, but are almost certain to elevate the standard of their own line. The steel industry affords a striking example of this. The men who wrought and thought, who worked intelligently, and incessantly to improve methods and processes, not only made the steel industry one of the foremost in existence, but themselves reaped the benefit in their share of this world's goods.

On Wednesday of last week examinations were held in Montreal to test intending plumbers, and satisfy the board,

which consists of practical men, that the applicants had an intelligent grasp of their subject. This means that the men desirous of entering the ranks of journeymen plumbers will not be allowed to do so until they are fully qualified.

The move made recently by the plumbers' association in holding these examinations for both masters and men, cannot be commended too highly, for it guarantees as nothing else would the proper qualification to engage in this important branch of engineering. Much of our domestic comfort is due to the many advances that have been made in plumbing within the past few years. People, generally, appreciate this only when something goes wrong, and the fact is forced upon them in a striking manner.

WIRELESS IN OPERATION.

MISHAPS and accidents of various kinds have been of too common occurrence recently for the good name of the St. Lawrence River route. The action of the Canadian Government in establishing wireless telegraph stations at different points along the route ought to commend itself to all interested in the welfare of our commerce. The system has passed little beyond the experimental stage, but enough has been done to prove its value.

The first wireless message was received last week, when the inward bound Allan steamship Parisian was reported off Heath Point, Anticosti. There was a dense fog at the time, and but for the new system her presence would not have been known. Communication was set up between the station and the boat, which reported that everything was satisfactory on board.

The completion of the six stations proposed will no doubt prove a boon to steamship companies, as well as a further safety to the general public, to say nothing of the beneficial effects on St. Lawrence River navigation.

It is interesting to note that the action of the Canadian Government, which was the first to interest itself officially in wireless telegraphy, is being followed by the British Government. The latter is about to bring in a bill making wireless telegraphy throughout the United Kingdom a Government monopoly.

WELL AND TRULY LAID.

FRIDAY, July 22, was a rather important day with H. S. Howland, Sons & Co., Limited, the wholesale hardware merchants of Toronto. It will be remembered that this firm was one of the victims of the great conflagration on April 19. Since the fire they have occupied the rink of the Parkdale Club. Shortly after the fire they purchased a block of land on Front street, nearly opposite the Union station, and on the 22nd inst. the work of erecting the warehouse on that site had so far progressed as to allow the firm to lay the corner stone.

Mr. Peleg Howland, president of the company, Mr. Geo. Howland, Mr. T. G. Dexter, manager, and the heads of the different departments were present. In the aperture below the corner stone Mr. Peleg Howland placed a large jar in which were a photograph of the late H. S. Howland, a copy of Hardware and Metal, a number of coins, and sundry documents. This done, Mrs. Peleg Howland was handed a handsome silver trowel, and with this she dexterously laid the required quantity of mortar in which the corner stone itself was to be laid. The stone was then lowered into position, and amid cheers Mrs. Howland gave the regulation taps with a hammer and declared the stone well and truly laid. At the same instant Hardware and Metal's photographer snapped his camera and the accompanying cut is a reproduction from the picture thus obtained.

After the stone had been laid and everybody had cheered, the workmen joining with the friends of the company in this function, an adjournment was made to the contractor's office, where refreshments were served and speeches were made. The first toast was, of course, to "The Firm," and Mr. Peleg Howland responded. His remarks were happy and hopeful of the firm's future, and he ventured the information that the corner stone of the new edifice was a relic of the fire. "Not," said he, "from our building, because the fire was so hot that we had no stones even left. It is from one of the buildings on the opposite side of the street."

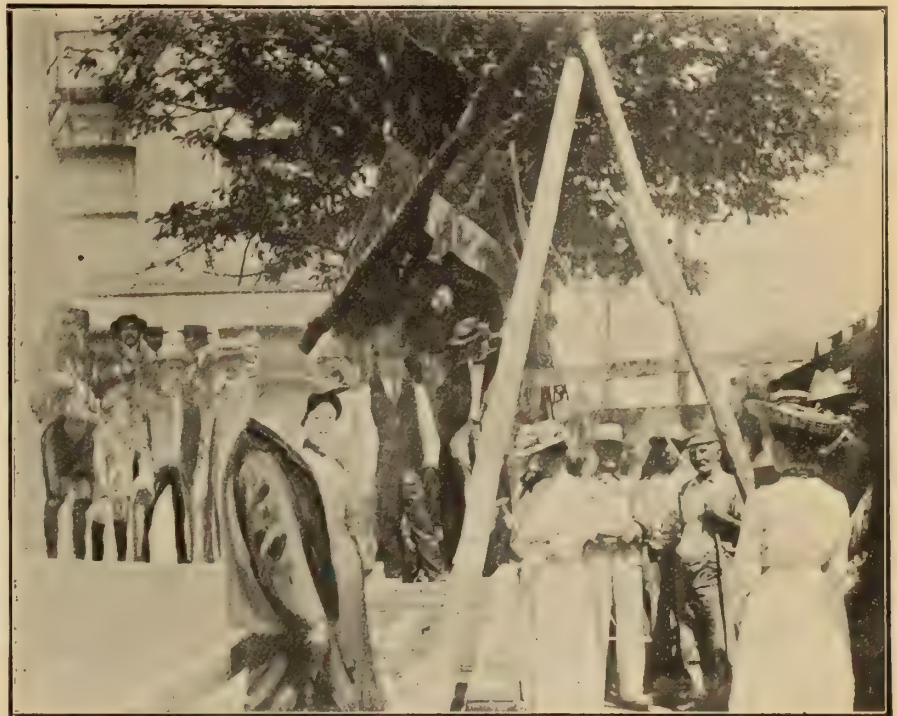
Another of the toasts was that of "Our Neighbors," which means, of course, the business men in the immediate vicinity of the new Howland building. Mr. Wm. Garside, of Garside & White, and Mr. Emil Nerlich, of Nerlich & Co., responded. Both made witty and interesting speeches. The latter remarked that he was glad that the Howland Co. were again to be one of his neighbors, and that they had been one of his neighbors for many years in the

old block which had been destroyed. During that time he had formed the highest opinion of the firm, and not only of the firm but of their employes as well, who were always courteous and obliging.

The health of Mrs. Howland, who had so well and truly laid the corner stone, was warmly received, and the mover of the toast remarked that as Howland, Sons & Co. had been such a successful hardware firm in this world, it would certainly be called upon to carry on the same line of business in the next world. Mrs. Howland, although taken by surprise, spoke extremely well, and was confident that the future of the firm was most promising. Her reference to the employes was particularly kindly and was liberally applauded.

Canada the question of confederation with the Dominion. For years the officials of the association have watched the development of trade between Canada and Newfoundland. In all their workings they had in view a still higher purpose, namely, the rounding out of confederation by bringing Newfoundland into the Dominion. It is firmly believed that the time now is opportune for bringing in Britain's oldest colony. Much enthusiasm has been created in commercial circles by the announcement of these facts, and the final outcome of the conference will be waited for anxiously all over Canada.

Another feature of the convention will be the visit of Hon. R. H. McCarthy, Comptroller of Customs of Trinidad, who has been specially invited. His



Mrs. Peleg Howland lays the corner stone of the new warehouse of H. S. Howland, Sons & Co., Limited.

The new building, which it is to be hoped will be completed before the severe Winter weather sets in, is 80 feet wide with a depth of 175 feet. It will be three storeys high, besides the basement.

IMPORTANT VISITORS COMING.

At the annual convention of the Canadian Manufacturers' Association, to be held in September next in Montreal, many distinguished visitors will attend. Among these will be the Hon. A. B. Morine, and Sir Robt. Bond, of Newfoundland. It has been officially stated that the mission of these visitors will be to discuss with the business men of

visit will create a better trade understanding between Canada and the West Indies, and it is hoped it will result in the formation and passing of a reciprocity treaty between Canada and the islands. Following this consummation, so much to be wished, it is likely that a modern steamship service will be immediately inaugurated between Canada and the Indies, and it is said that the Elder-Dempster Co. will be only too willing to talk over the matter with the Canadian representatives.

Mr. M. H. Day, general manager of the Consumers' Cordage Co., spent Thursday, the 28th inst., in Toronto.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,
232 McGill Street.

Montreal, July 28, 1904.

Hardware.

BUSINESS in hardware lines continues very satisfactory, considering the season of the year. With part of the wholesale staffs off, as is usual at this time, those remaining are busy filling orders from all sides. The season for goods usually associated with the summer trade is pretty well over, and preparation is already begun for Fall trade. The anticipation of splendid crops throughout the country gives a brightened tone to the future outlook and dealers are preparing accordingly.

New quotations are given this week for some of the Fall lines including skates, hockey sticks, hockey pucks and sleigh bells. There is no change in prices noted this week.

Agricultural Wrenches—There is an active demand for agricultural wrenches at present. We quote: 6 in., \$2.85 a dozen; 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

Skates—Orders are already being placed and a big demand is anticipated. We quote: Halifax pattern, plain, 38c a pair; nickeled, 60c a pair; Ladies nickel plated, plain 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50 a pair; hockey, plain steel 30c a pair; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop \$1.30 a pair, high grade nickel plated, concaved \$1.60 a pair.

Hockey Sticks—Prices are: Second growth men's \$4.00 a dozen; second growth ash, men's, \$3.30 a dozen; rock elm \$2.35 a dozen; boys' elm, \$1.50 a dozen.

Hockey Pucks—Price quoted for coming season is \$2.10 a dozen.

Lanterns—This line is selling well. We quote. Cold blast, \$7.00 a dozen; No. 0 safety, \$4.00 a dozen.

Sleigh Bells—We quote: Brass team

bells, rough \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5.00 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelats, 38c to \$2.25 a dozen; York eye bells, pear shaped \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3.00 each.

Washing Machines—Market is somewhat quiet at present, but odd orders are received. We quote as follows: Round (three legs), \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Spring Hinges—There is little doing in his line. We quote: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—Few orders were received this week: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Wire Coat and Hat Hooks—The demand is good this week. Prices continue 75c a gross for 3 inch.

Churns—Rather quiet at present: Discounts 40 and 15 per cent., f. o. b., Montreal and 30 and 10 per cent. f. o. b. factory.

Screen Wire Cloth—Selling in smaller quantities. Prices as before \$1.50 per 100 sq. feet.

Poultry Netting—Market a little quieter than formerly. Discounts for 2 inch 19 gauge standard extras are 60 and 5; for 2 inch 16 gauge the discounts are 55 and 5 per cent.

Annealed Hay Wire—Volume of business in annealed hay wire is unusually large. Prices and discounts the same.

Galvanized Poultry Netting Staples—A fair business being done. Prices are as follows: Sizes 5-8, 3-4, 1 1-8, 10 lb. boxes \$12.50 list; 25 and 50 lb. boxes, \$12.25 list; 100 lb. boxes, \$12 list. Less 57 1-2 per cent.

Fence Staples—A good business is reported this week. We quote \$3 per 100 lb. keg for galvanized and \$2.80 for

bright; 25 to 50 lb. packages, 25c extra.

Barb Wire—An active market continues with no changes. We quote: \$2.75 per 100 lb. f. o. b. Montreal, and \$2.50 f. o. b. Cleveland. Car lots of 15 tons, \$2.40 f. o. b. Cleveland.

Galvanized Wire—Merely a nominal business this week. We quote as follows: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In car lots f. o. b. Cleveland, No 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than car lots 12 1-2c extra per 100 lbs. will be charged.

Rivets and Burrs—In good demand with supplies well up. Discounts are as follows: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

Screws—The market continues brisk. Discounts are as follows. Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass flat head, 80 per cent.

Bolts and Nuts—These continue in active demand for all sizes. We quote: Carriage bolts, common (\$1 list). 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all

sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Cut Nails—Prices continue steady with a good business doing. We quote as before, \$2.30 per keg f.o.b. Montreal, Hamilton, Toronto and St. John.

Wire Nails—No change this week. The same briskness continues. We quote: \$2.40 per keg car lots, and \$2.45 per keg in small lots f. o. b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

Pressed Spikes—In fairly good demand. Discount as before 25 per cent.

Horseshoes—Nothing special to note this week. An ordinary business continues. We quote the following: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horsenails—The volume of business remains good. No changes in prices. We quote as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list; other brands, 55 per cent. off list.

Shot Guns and Rifles—This promises to be a record year for these lines. This is due to the fact that discounts have been increased and also to the particularly low price of single barreled shot guns.

Ammunition—An active business is already reported. American loaded shells have advanced; the former discount was 30 per cent. It is now 17 1-2. We quote: Rim fire cartridges, 30 and 2 1-2 discount from list; centre fire, 5 per cent. advance on list.

Roofing Pitch—This line continues active. Prices as before \$1 a cwt.

Building Paper—Building operations still call for a large amount of these goods. We quote: Tarred fel, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c

per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Fire Brick—Trade continues dull with seemingly no inclination to pick up.

Cement—The cement market has not recovered from the set back it received in the Spring due to labor troubles. Prices remain unchanged at former quotations, which are: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex cars.

Cordage—The cordage business continues about the same as last week, which was about the average. Quotations are as follows: British pure manila, 11 1-2c; pure manila, 14 1-2c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; uRssian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

METALS.

There is no considerable change in the metal market, and in general, the conditions that prevailed last week still hold. Quietness still continues with little tendency towards brightening. Little or no pig iron is selling except of Canadian reduction. Canada plates are more active, orders being now placed for Fall shipments but for immediate shipment there is little doing. Tin jumped 1 1-2c during the week and dropped again but at present is slightly stiffer. Copper advanced 1-4c during the week although the former price still holds for quantities. Pig lead market continues fairly firm with slight variations.

Pig Iron—The increase of price in Summerlee noted last week holds. There is no change in the demand. Prices are:

"Disc," No. 1.....	\$17.50 delivered Montreal.
"Dom.," No. 1.....	18.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.75 " "
Glenarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.00 " "
" (pecial).....	17.50 " "
Ayresome No. 1.....	17.50 " "
" No. 3.....	16.90 " "
Clarence No. 1.....	16.25 " "
" No. 3.....	16.00 " "

Bar Iron—There is a fair demand with no change in prices. Prices con-

tinue: Merchants' bar, \$1.75; horseshoe iron, \$2; forged iron, \$1.95.

Merchant Steel—Somewhat quieter. Prices as before. We quote: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.35; machinery (iron finish), \$2; square harrow, \$2.45.

Tool Steel—An average business is being done. We quote the following: Black Diamond, 8c to 9c; Sander's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

Black Sheets—These continue steady with fair demand. We quote: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Canada Plates—Orders are now being placed for Fall shipment. Quotations are subject to concessions. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized, \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Galvanized Iron—There is a fair amount of import business being done at steady prices. No new quotations are reported. Prices are quoted as follows: Queen's Head, 28 gauge, \$4.30; 26 gauge, \$4.05; 22 to 24 gauge, \$3.80; 16 to 20 gauge, \$3.70; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.30. "Windmill Best," 28 gauge, \$4. In less than case lots, 25c extra.

Sheet Zinc—Market continues firm. Last week's advance still holds: Cask lots are selling at \$6.37 1-2 to \$6.62 1-2. Small quantities \$6.62 1-2 to \$6.87 1-2.

Tin Plates—These continue the same. Cokes, \$3.75 and charcoal, \$4.

Ingot Tin—As noted above tin jumped 1 1-2c during the week and dropped again. It is now stiffer and no concessions are obtainable. Quotations are 30 to 30 1-2c.

Ingot Copper—Copper advanced 1-4c during the week. Quotations are 13 1-2 to 13 3-4c, the former being only for quantities.

Pig Lead—Market continues fairly

firm with slight variations. Quoted at \$3.25 to \$3.35.

Coil Chain—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on carlots.

Scrap Metal and Old Material—The price and general quietness continue the same as last week. We quote as follows: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, July 29, 1904.

Hardware.

THE holiday season is at its height, and market conditions are naturally holiday conditions. Many business men are taking their vacations. However, it must be said that trade is somewhat brisker than it usually is at this time of the year. There is an appreciable and increasing demand for sporting goods. Retailers are already placing orders for delivery later on. The season for lawn mowers, screen doors, screen wire cloth and spring hinges is now over. There are still a few scattered orders and our quotations will be continued for another week. The only change in quotations this week is in woodenware. In spite of the higher protection afforded woodenware by the recent tariff revision, manufacturers instead of taking advantage of the higher duty, as they might have done, have reduced the price to the trade. In tubs the reduction is as follows: No. 0, 30c; No. 1, 35c; No. 2, 25c; No. 3, 15c. In pails the reduction has been 8c for 2 hoop.

Harvest Tools—There is a steady demand for this line.

Sporting Goods—Retailers are already placing orders for future delivery, and the demand is being felt to a very considerable extent.

Washing Machines—Demand is very good this week. We quote: Round reacting washer, per dozen, \$56; square,

reacting washer, per dozen, \$59; Eclipse, \$48; Dowsell, \$36; New Century, \$72; Capital, \$42; Magie, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Woodenware—A reduction in the quotations on both tubs and pails has been made. This reduction has been made in the face of the increased protection on woodenware afforded in the recent tariff changes. This shows that Canadian manufacturers are far from taking undue advantage of the higher duty. The amount of the reduction will be found in the introductory paragraph. Reduced quotations are as follows: Tubs, No. 0, \$11.25; No. 1, \$9.00; No. 2, \$8.00; No. 3, \$7.00; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2.00; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

Steel Track Door Hangers—There is little change in the situation. Business is very fair for this season.

Chain—The demand is fair. Prices are quoted as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Lawn Mowers—The demand for this line is over for this season. Quotations are: Woodyatt, 10 1-2 inch wheel \$8.50; Star, 9 inch, \$7; Daisy, 8 inch, \$5.75; Philadelphia, 7 1-2 inch, \$7; Ontario, 7 1-2 inch, \$15.80; King Edward, 12 inch, \$9.50 (14 inch cut in above). D. Maxwell & Sons, 10 1-2 inch, \$7.50 to \$10; 9 inch, \$5.50 to \$6.25; 8 inch, \$4.90 to \$5.50. Discount 50 per cent.

Screw Doors—The season is practically over. However, we quote as follows: Common, two or three panel, walnut, 4 inch, \$6.50; yellow and green stained, \$6.75; in natural colors oil finish, \$8.75, with 20c less for 3-inch style.

Screen Wire Cloth—The demand is over for this season. We still quote at \$1.50 per 100 feet.

Spring Hinges—The season for this line is now over. Prices are as follows: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Barb Wire—A very fair trade has been done during the past week, although the demand is lessening each week. We quote as follows: \$2.75 per

100 lbs. f. o. b. Toronto and \$2.50 f. o. b. Cleveland. Carlots of 15 tons, \$2.40 f. o. b. Cleveland.

Galvanized Wire—A fair trade continues at unchanged prices. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs. extra charged.

Coiled Spring Wire—Sorting orders are coming in from day to day. Prices are steady. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—Business is good this week. Prices are steady. Quotations are \$2.45 per keg f. o. b. Toronto, with carlots \$2.40.

Cut Nails—A moderate trade doing, with prices steady at \$2.30 per keg f. o. b. Toronto and Hamilton.

Horseshoes—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business can be said to be very good in this line. Prices are unchanged as follows: "C" brand, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—A steady active demand continues. Prices are unchanged. We quote: Flat Lead bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—A steady and brisk demand continues. Prices remain unchanged. We quote: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—A very fair demand is reported by all dealers. Prices are steady. We now quote: Carriage bolts,

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

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Deseronto Iron Co.

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BAR IRON, PIG IRON GALVANIZED IRON,
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C.F. JACKSON & CO., Limited

Importers and Commission Merchants

51 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Cordage—Prices remain at last week's changed quotations. The demand is reported to be quite active. However, the season for binder twine is drawing to a close. We quote the following prices: Sisal, 10 1-4c; standard, 10 1-4c; standard manila (550 ft.), 11 1-4c; manila (600 ft.), 12 1-4c; pure manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are as follows: Pure manila, 14 1-2c; British pure manila, 11 1-2; sisal, 11 double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sasheord, "Herecules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 24c; 4 ply, 29c; ealking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Building Paper—There still continues to be a brisk demand for all kinds of building paper, especially roofing paper. The outlook is good. Prices are unchanged. We quote: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

Firebrick—The demand this week for firebrick is a little quieter. Prices are unchanged. Out quotations are as the following: English and Scotch firebrick 30 to 35c American, low grade, 22 to 27c; high grade, 32 1-2 to 40c.

Cement—Trade still continues good in the cement market. Prices are unchanged. We quote the following: Canadian Portland, \$1.80 to \$2.10; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2; ex-store; American Portland \$2.30 to \$2.40 f. o. b. Toronto.

Tinned Sheets Tinplates Canada Plates Polished Sheets

ETC., ETC.

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Take a look around your town and see if any of the breweries or hotels need new pumps.

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Special pumps for acids, liquors, etc.

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McDougall Pumps
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The R. McDougall Co., Limited
GALT, ONTARIO.

"ALPHA"

HIGH SPEED STEEL

Crucible Cast Steel

for Tools of all kinds.

"B.C." Miners' Drill Steel

B. K. MORTON & CO.

SHEFFIELD, ENG.

Agents for Ontario:

BAINES & PECKOVER, Toronto

Agents for British Columbia:

E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

METALS.

Although outside markets show considerable strength, business is quiet as is usual at this season. This is the holiday season, and many buyers, both large and small, are taking vacations. The outlook for the future is bright, depending on good crop prospects in Ontario and Manitoba. No change in market quotations is to be noted.

Pig Iron—Prices are very steady, the steady tone of the American market probably having something to do with it. However, there is very little movement on the market. Business is decidedly dull. Quotations are as follows:

Middleboro, f.o.b., Toronto.....	\$18 75
Hamilton, No. 1 ".....	\$17 50 to 16 75
" No. 2 ".....	17 00 to 17 25
" No. 1, Hamilton.....	16 25 to 16 50
Midland, No. 1 ".....	17 50 to 17 75
" No. 2 ".....	17 00 to 17 25
" No. 1 f.o.b. Midland.....	16 00 to 16 50
Radnor, f.o.b. furnaces.....	27 00
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—A good business is being done, and prices are firmly maintained. We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—A very good demand is reported, and prices are steady. Quotations as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—The advanced prices of last week remain unchanged. Quotations are from 30c to 31c.

Galvanized Sheets—There is a very sound demand. Margin is very close. Quotations are as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tin Plates—There is a very good demand, with prices unchanged. Stocks are light. We quote the following: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—The improved demand noted last week continues. Prices remain steady. We quote: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Copper—Market is active this week;

NICHOLSON FILES

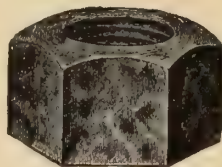
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QUICK CUTTING. LONG WEARING.

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DOMINION WORKS, - Port Hope, Ont.



THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs,
Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.

DO IT NOW

MANUFACTURERS WISHING TO BE
REPRESENTED IN

MANITOBA

COMMUNICATE WITH

DAVID PHILIP, Manufacturers' Agent

References Furnished.

470 Main St., Baker Block, WINNIPEG, MAN.



outside markets are firm. Prices are unchanged, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

Brass—Conditions are unchanged. There is a fair demand, with discount steady at 15 per cent.

Lead—There is a good demand with prices very firm. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—There is a stronger demand. Buying is active at 5 3-4 to 6c per lb.

Solder—There is a fair trade. Prices

are 1-2c lower. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Antimony—Market is quiet. Quotations are: 7 1-2 to 8c per lb.

Old Material—Business still continues the same on this market. Owing to the large orders received by the mills, prices are a trifle stronger, but no material change has taken place. We quote as follows: Heavy copper and wire 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 9 1-4c per lb.; heavy yellow brass, 7 1-2 to 8 1-2c per lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.45 per cwt.; scrap zinc, 3 1-4

to 1c per lb.; iron, No. 1 wrought, \$8 to \$9; No. 2 wrought, \$2; machinery cast scrap, \$11; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 4 to 4 1-2c per lb.; country mixed rags, 70c per 100 lbs.

Petroleum—The petroleum market still continues good. Trade is brisk and prices are unchanged. Our quotations are: Canadian water white, 18c; Canadian prime white, 16 1-2c; American water white, 19c, ex-warehouse.

Hides, Tallow, Skins and Wool.

Trade in hides, tallow, skins and wool has been brisk during the week under review. The demand is steadily growing. Prices remain the same. We quote the following:

HIDES

No. 1 green, per lb.	0 08
" 2 " " "	0 07
" 1 " steers, per lb.	0 08 1/2
" 2 " " "	0 07 1/2
Cured, per lb.	0 08 1/2

CALFSKINS.

Veal skins, No. 1, 6 to 12 lb. inclusive	0 10
" 2 " " "	0 08
" 1 " 15 to 20 lb	0 09
" 2 " " "	0 07
Deacons (dairies), each	0 65
Sheepskins	1 00 1 25
Lamb skins	0 40
Shearlings	0 35

TALLOW.

Rendred Tallow, per lb.	0 04 0 04 1/2
-------------------------	---------------

WOOL.

Unwashed wool, per lb.	0 11 1/2 0 13
Fleece wool, new clip, per lb	0 19 1/2 0 20
Pulled wools, super, per lb.	0 19 0 21
extra	0 22 0 23

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence to **HARDWARE AND METAL.**

Vancouver, B. C., July 22, 1904.

THERE is an opportunity of the enterprising merchant who takes advantage of Spring conditions in Atlin, one of the steadily progressive mining districts of the northern part of the province. Every Spring there is a shortage of supplies, this year it being in powder, mining tools, and such necessities used in general operations. Advices from Atlin of a month ago state that there was no powder to be had, although there was a shipment somewhere on the way in. It is noted that every season the same conditions exist, the ordering of supplies being left over from Fall until Winter, with the result that considerable of the good working season is lost before the powder and tools arrive.

* * *

The local hardware trade continues fairly good, although many logging camps have closed. This deficiency is made up by business from the interior. Mining brings large orders to foundries and machine shops in Vancouver, and just at present there is a general activity along this line. From the north

comes word of the construction of dredges for the Stewart River in the Yukon, owing to the success of the initial dredge installed by the Ogilvie Co., and in Atlin dredging is also a success. Two more dredges will be built for the latter district, with a cost of several hundred thousand dollars. On the Fraser River, too, dredging is getting good returns, and the large dredge manufactured by the William Hamilton Co., of Peterboro, is to be followed by others. There is a big steel dredge at Lytton, and if this type is as successful as it is expected it will be, more will be constructed on the same plan.

* * *

There will be a big call for copper wire for the improvements to be made by the Canadian Pacific Telegraph Co. to its system in the west. Mr. James Kent has just been to the coast on his annual trip of inspection, and announces that new wires will be stretched right away between Winnipeg and Regina, and between Winnipeg and Montreal. Besides, there will be considerable additions to the service between Lake Superior and the Rockies, and west of the Rockies more improvements are in sight. There is a line from Vernon to Midway in anticipation, and it is stated that the report has been favorable, and that it will be constructed shortly. In the Kootenay work is now going on in connection with re-poling and re-wiring certain sections.

* * *

The mining of coal in British Columbia, which received a setback when oil came in favor a couple of years ago, may again resume its old-time activity. One of the largest coast steamers, the Dalles City, put in oil burners, but has found them so unsatisfactory that they are to be taken out. Moreover, the interests of the Dunsmuirs and the Western Fuel Co., the latter having its collieries at Nanaimo, have merged, to buck the competition of oil and gas.

In the anthracite line, the C. P. R. collieries at Banff, opened this year, will provide a good coal for consumption, principally in the Kootenay towns and western territories. While it is not of as good anthracite quality as the Pennsylvania product, it is a great deal better than the bituminous variety which has been the only coal heretofore obtainable in the west.

* * *

The building of railways in Mexico ought to be of interest to those who deal in railroad irons. Mr. G. L. Courtenay, the special agent of the E. & N. Railway, who went to Mexico to look up the trade conditions, reports that a progressive government in that



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Metallic Roofing Co., Limited,
Wholesale Manufacturers,
Toronto, Canada.

country is building lines to connect with every seaport of any importance. Harbors are being improved with breakwaters, and there is a general prevalence of activity. The cost of the various lines runs from \$15,000,000 to \$150,000,000. He sees good prospects for trade also in lumber, coal, canned goods, sugar and salt.

* * *

The development of the power at Stave Lake, near this city, will very probably be undertaken shortly. The company has a meeting on Tuesday next to consider two offers of purchase, and one will be accepted. This will cause considerable demand in many lines.

The ship Celtic Monarch, from the Old Country, arrived in port to-day, after being long delayed by storms. She has a large cargo of cement for this port.

The new Government bridge at New Westminster will be opened to-morrow with appropriate ceremonies and great celebrations.

The Cranbrook Electric Light Co. are extending telephone lines from that city into the surrounding district.

Oldland & Martin have formed a partnership for the manufacture of cement blocks for building purposes, at Fernie. Machinery is now on the way west for the plant.

The plant of the new saw mill of the Rat Portage Lumber Co., just installed at Harrison River, on the main line of the C. P. R., a short distance from Vancouver, is the most complete and up-

to-date of any on the coast. The labor and time-saving appliances are perfect.

The Monarch Lumber Co. have taken over the Ross-McLaren mills at New Westminster, and will improve the plant.

The mill of the Canadian Pacific Lumber Co., recently burned at Port Moody, will be rebuilt, and a complete plant put in. Construction operations will be commenced right away.

The Lawrence Hardware Co., Limited, have been incorporated with a capital of \$50,000, divided into 500 shares of \$100 each, to acquire and carry on the mercantile business now carried on by W. M. Lawrence, Revelstoke.

The Elk River Coal and Oil Co. have been incorporated with a capital of \$25,000.

Mr. J. B. Ferguson, just returned from a four months' trip to the east, reports that German and American capitalists will be interested in the development of the oil and coal prospects of the Western Oil and Coal Co. in western Alberta and east Kootenay.

The Wood-Vallance Hardware Co., Limited, have been incorporated, with a capital of \$50,000, divided into 2,000 shares of \$25 each, to carry on a wholesale and retail hardware business at Nelson and other points.

The British Columbia Foundry & Engine Works Co., Limited, have been incorporated with a capital of \$100,000, in \$50 shares.

PITTSBURG METAL MARKET.

From The Iron Trade Review, July 28, 1904.

THE buying of pig iron as well as finished material continues on a limited basis, the movement at the beginning of the third quarter of the year being much lighter than at the inception of the first and second quarters. The improvement heralded far and wide has not yet appeared on the books of the manufacturers in the shape of orders, and if conditions are really improving it will be some time before consumers reach the point where they will cover their requirements for any extended periods. While it is true that merchant furnace operators in the Mahoning and Shenango Valleys have advanced prices slightly, the amount of business taken in the past three weeks was not the cause of such action. The increased prices are asked in some cases because makers believe the outlook warrants something more than bare cost, and while asking prices are on a higher basis, business is actually done on a level almost as low as at the beginning of this month. Idle steel and iron producing capacity still continues large.

While slight improvement is noticed in the wire and wire nail trade, it does not warrant the resumption of plants but the expectation of the usual seasonable demand necessitates the preparation of a stock. Betterment is also noticed in structural material, buying of which has improved somewhat in all parts of the country. Nearly all of it is limited to small lots, however. Bars and plates show no improvement, and the former are not expected to improve before September, when the implement plants are expected to resume. An increased demand for plates is not looked for this year.

The tin plate scales have been fully adjusted, the tin house workers accepting a reduction of 5 per cent., while the concessions on rebate tin plate with the amalgamated association were cut in two. Instead of receiving a 25 per cent. concession in the wages on this plate the American Sheet & Tin Plate Co. will only receive 12½ per cent. in the future. Practically all of the independent sheet and tin plate manufacturers have already signed the amalgamated scale and no trouble is looked for in these mills.

Pig Iron — While inquiries continue heavy, less than one fourth of the iron asked for results in the placing of business. We note the sale of 2,500 tons of basic to an independent steel works in Ohio for delivery through September on the basis of \$11.35 Valley furnace for the July allotment and \$11.50 for August and September. We also note the sale of 100 tons of Bessemer which netted the furnace \$11.70. An order for 1,000 tons of low phosphorus iron was placed at \$17.75, Pittsburg, the previous sales having been made at \$18.50. Northern foundry iron is not being offered below \$11.65. Valley furnace and a few stacks are holding out for \$12 at furnace or \$12.85 Pittsburg. On forge iron \$11.85 Pittsburg can be done. Southern iron, No. 2 foundry, is being held firmly at \$9.25 to \$9.50, Birmingham. The Wheeling Mold & Foundry Co. has not yet closed for its iron for the New York tunnel castings. There has been some figuring on warrants in this connection. The contracts for the iron for the other tunnel castings have not yet been placed. The competition among the furnaces to secure this business is reported as keen and some low prices, despite the extended delivery, are looked for. We revise quotations as follows:

Bessemer, Valley	\$11 75 to	\$12 00
Bessemer, Pittsburg	12 60 to	12 85
No. 1 Foundry	12 75 to	13 00
No. 2 Foundry	12 35 to	12 60
Grav forge, Pittsburg	11 85 to	12 00
Chilled basic, Valley	11 35 to	11 50
Chilled basic, Pittsburg	12 20 to	12 35

Steel—The market continues quiet and agreed prices continue to be shaded from \$1.50 to \$2 per ton. Demand for wire rods is improving and there is some buying at slightly lower prices. Agreed quotations are as follows: Bessemer and open-hearth billets, 4x4 inches, and slabs up to and including 0.25 carbon, \$23 Pittsburg, Wheeling, Valley, Johnstown, Ashland, Ky., Ironton, O., and Lorain, O., 0.26 and including 0.60 carbon, 21 advance; and 0.61 to 1.00 carbon \$2 advance. Billets smaller than 3½ inches and sheets and tin bars are \$1 per ton extra. Bessemer and open-hearth rods are quoted at \$28 to \$28.50 Pittsburg.

Plates—The market shows no improvement, and no great change is now looked for the remainder of the year. Most of the mills are operating at greatly reduced capacity and one of the Homestead mills which operated double turn last week is on single turn again. We make the following quotations: Tank plates ¼ inch thick and up to 100 inches in width 1.60c at mill Pittsburg; flange and boiler steel, 1.70c marine, ordinary firebox, A. B. M. A. specifications, 1.80c; still bottom steel, 1.85c; locomotive firebox, not less than 2.10c; and it ranges in price to 3c. Plates, more than 10 inches, 5c extra 100 lbs. Plates 3-16 inch in thickness, \$2 extra; gauges Nos. 7 and 8, \$3 extra. These quotations are based on carload lots with 5c extra a hundred lbs. for less than carload lots. Terms, net cash in 30 days.

Bars—Demand for iron and steel bars continues light and the mills are not receiving heavy orders on specifications. With the resumption of the agricultural implement plants in the Fall a revival of the demand for bars is looked for, but nothing out of the ordinary is expected during August. We make the following quotations: Bar iron, 1.25c to 1.30c Pittsburg for local delivery, while for western shipments quotations are based on 1.25c to 1.35c Pittsburg. Hoops are held at 1.55c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open-hearth, 1.40c; plow beams and cultivator beams, 1.35c net; channels, angles, zeos and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 lbs. of a size, not less than 1,000 lbs., 10c advance; less than 1,000 lbs. of a size, 30c advance.

Sheets—The market continues quiet, and 2.10c is the minimum on 28 gauge, black. Black sheets in carload lots, one pass, are held as follows: No. 8, 1.60c; No. 9, 1.65c; Nos. 12 to 14, 1.70c; Nos. 15-17, 1.75c to 1.80c; Nos. 18-21, 1.85c to 1.90c; Nos. 22-24, 1.95c; Nos. 25-26, 2c; No. 27, 2.05c; No. 28, 2.10c to

2.15c; No. 29, 2.35c to 2.40c; No. 30, 2.50c to 2.55c. Galvanized: Nos. 12-17, 2.20c to 2.25c; Nos. 18-21, 2.35c to 2.40c; Nos. 22-24, 2.50c to 2.55c; Nos. 25-26, 2.65c to 2.70c; No. 27, 2.90c; No. 28, 3.10c; No. 29, 3.45c to 3.50c; No. 30, 3.85c to 3.90c.

Wire and Wire Nails—Anticipating a heavy Fall trade, the wire and nail mills are already resuming operations. As yet no very large orders have been placed, but as jobbers' stocks are known to be light all over the country the buying when commenced, is expected to be heavy. We make the following quotations: Wire nails, carload lots to jobbers f. o. b. cars Pittsburg, are quoted \$1.90 base; plain wire, carload lots, \$1.80 base; barb wire, carload lots, \$2.20 base; staples, carload lots, \$2.05 keg. Galvanized 30c extra. Carload lots to retailers are held at 5c advance in all lines, and on less than carload lots a further advance of 10c is charged. Steel and iron cut nails, carload lots, \$1.75, and less than carload lots, \$1.80 f. o. b. Pittsburg, plus freight to point of destination. Terms, 60 days, less 2 per cent. off in 10 days.

Merchant Steel—At the meeting of the shafting association held last week prices were reaffirmed. Demand is light and none of the mills are operating at their full capacity. We make the following quotations: Toe calk, 1.90c; carriage spring steel, 1.75c; tire steel, 1.55c to 1.60c; plow steel, 6 inches and under, 1.35c for Bessemer and open-hearth; plow slabs, 3-4 inch and heavier, 1.60c. The demand for shafting on the part of the machinery manufacturers is not heavy, and tonnage has therefore been considerably affected. Drawn and cold rolled shafting is held at 52 per cent. off in carload lots and 47 off in less than carload lots.

Old Material—Heavy melting stock has strengthened considerably and on small lots for immediate delivery no better than \$11 Pittsburg can be done. Most of the material is now in the hands of the dealers who are holding for higher prices, while the railroads are not making heavy offerings at ruling quotations. Re-rolling rails are held at \$13.

Coke—In the upper and lower districts of the Connellsville region upwards of 10,500 ovens continue idle. Until prices advance there is little indication of these idle plants resuming, as coke is now selling at prices below cost at many plants. The H. C. Frick Coke Co. awarded contracts this week for the erection of 1,000 coke ovens in the up-

per region, to be located on undeveloped coal property. Furnace coke, strictly high grade, is selling at \$1.35 for delivery during the next three months, while for the last quarter \$1.40 is asked. On foundry coke better prices are ruling, strictly high grade coke being held at \$1.80 to \$1.85, while a few producers are receiving over \$2 for their product. During the week ending Saturday, July 16, the production of the upper region reached 158,612 tons and the output of the lower region amounted to 51,940 tons.

PERSONAL MENTION.

Mr. Colin R. Gilbertson, of the Gilbertson Co., Limited, Swansea, who manufacture the Comet Brand of galvanized sheets, and galvanized Canada plates, is at present in Montreal. He is on his way home from a trip round the world, and while in Canada is taking the opportunity of making the acquaintance of the trade in this country.

Mr. C. F. Smallpiece, manager of the order department of Lewis Bros., Montreal, has just returned after two weeks' vacation spent with some western representatives of the firm among the lakes north of Peterboro.

Mr. S. W. Baker, representing Berry Bros., Limited, varnish manufacturers, was at the Windsor Hotel, Montreal, this week, giving demonstrations showing the virtues of their high class varnishes.

EXPANSION IN NEW ONTARIO.

In Temagami the government has reserved 2,500 square miles of the finest timber land which is covered with a heavy growth of fine pine. Railway facilities are being rapidly constructed and the new road being built by the Ontario Government between North Bay and New Liskeard, is being pushed with all possible despatch. Grading has been completed and rails are being laid at the rate of a mile a day. It is expected that construction trains will be running between the two points before August 1. The distance is 105 miles.

Contracts have also been let for another road 100 miles long to run north and join the Grand Trunk Pacific at a point northwest of Lake Abitibi. The line will be as direct as possible and by it the distance from Toronto to the line of the Grand Trunk Pacific will be 330 miles.

Operations have also been started by the Canadian Pacific on their line from Sudbury to Toronto, and already the line is under way to Byng Inlet at the mouth of the French river. This is a splendid harbor and will give the C. P. R. a deep water port on Georgian Bay. The branch

will leave the main line of the C. P. R. at a point about five miles east of Sudbury, while the projected Mackenzie and Mann line will strike in about two miles west of Sudbury.

The Best Door Closer is . . .
NEWMAN'S INVINCIBLE FLOOR SPRING
 Will close a door silently against any pressure of wind. Has many working advantages over the ordinary spring, and has twice the wear. In use throughout Great Britain and the Colonies. Gives perfect satisfaction. Made only by
W. NEWMAN & SONS,
 Hospital St., BIRMINGHAM

ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,
 13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

\$2 FOR THIS SMALL SUM THE **\$2**
MANUFACTURER and SUPPLY MERCHANT
 may keep posted on new openings for trade.
The CANADIAN CONTRACT RECORD
 reports weekly all projected building and other construction works throughout Canada as well as new business enterprises.
 Send your name and address with \$2 for a year's subscription to
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\$2 TORONTO and MONTREAL **\$2**

1904 **Canadian** 1904
National Exhibition
 Toronto, Ont.
August 29th to September 12th

Largest and finest exhibits of Canadian manufactures, agricultural products, live stock, etc., etc., ever shown. New buildings, improved facilities and greater variety of attractions than ever.

"BLACK WATCH BAND"

The Band of the "Black Watch" (the famous 42nd Royal Highlanders) will attend the Exhibition, by permission of his Gracious Majesty the King and officers of the Regiment, and will play three concerts daily throughout its entire course.

THE RELIEF OF LUCKNOW

The grandest pyro-military display ever seen in Canada will be presented before the Grand Stand each evening with hundreds of performers, brilliant costumes, gorgeous pyrotechnic setting, and assisted by the pipers of the "Black Watch."

SPECIAL ATTRACTIONS

"Dare-Devil Schreyer" in his leap from a bicycle 108 feet into a tank of water: **The Bickett Family**, world-famous aerial acrobats; **Winschermann's Wonderful Trained Bears**; **Adie's Troop of Lions**, the most remarkable group of trained animals in the world, and many other acts of equal merit.

Special Railway Rates.

Ask your Station Agent for Particulars.

Remember the Dates,

August 29th to September 12th

W. K. McNAUGHT,
 President

J. O. ORR,
 Secretary and Manager

"A Record, Not a Prospectus."

Mr Fielding said in a recent speech at Toronto, that he would present "a record, not a prospectus."

That is what we wish to do to-day with reference to "C" brand Horse Nails.

Our Company has a record of thirty-nine long years in making Horse Nails: our works being established in Montreal in the year 1865, and are the oldest and largest in Canada devoted to the exclusive manufacture of Horse Nails.

The record of the "C" brand Horse Nails for that long period shows that they have always been accepted as the standard—that means they were the best—they are still the standard to-day.

The record of sales shows that there are more "C" brand nails sold in Canada than any other; we believe nearly equal to all the other brands put together.

The record of current prices for thirty-nine years shows that no other brands of Horse Nails made in Canada have ever been quoted in the open market at prices equal to the "C" brand, which is a confession on the part of all other manufacturers that they do not value their nails as equal to the "C"—that is their record!

We would like to record every Dealer and Farrier in Canada as purchasers of "C" horse nails this year. Will you buy them the next time you order? Ask the Farrier to whom you sell them to note carefully the results. He should find every nail perfect and ready to drive, and that they will hold on the shoe longest, and be free from split nails, or heads flying off; a common fault with low-priced nails.

We shall be pleased to furnish, on application to us, free samples of "C" nails for distribution and trial among your Farrier customers.

CANADA HORSE NAIL COMPANY, MONTREAL.

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL
Room 308 McIntyre Block,
Winnipeg, July 17, 1904.

BUSINESS makes a good showing this week, and prospects for an active Fall trade are good. There is practically no change in market quotations.

Winnipeg is a lively city just now. The Dominion exposition is in full swing, and the city is alive with visitors. There is a goodly representation from eastern Canada, and there can be little doubt but that the visit of easterners will have the effect of opening their eyes more fully to the immense possibilities of the west.

We quote:

Barbed wire, 100 lb.	\$3 15
Plain galvanized.....6 to 8	3 39
" " " " " " " " " " " "	2 50
Plain galvanized.....10	3 50
" " " " " " " " " " " "	3 10
" " " " " " " " " " " "	3 20
" " " " " " " " " " " "	3 90
" " " " " " " " " " " "	4 45
" " " " " " " " " " " "	4 60
Plain twist	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
" " " " " " " " " " " "	3 48
" " " " " " " " " " " "	3 56
" " " " " " " " " " " "	3 66
" " " " " " " " " " " "	3 76
" " " " " " " " " " " "	3 91

Annealed wires (uncoiled) 10c. less.
Horseshoes, iron, No. 0 to No. 1..... \$4 75

Horsenails, No. 4—1½ in., list price	0 48
" " " " " " " " " " " "	5-2 " " " " " " " " " " " "
" " " " " " " " " " " "	6-2½ " " " " " " " " " " " "
" " " " " " " " " " " "	7-2½ " " " " " " " " " " " "
" " " " " " " " " " " "	8-2½ " " " " " " " " " " " "
" " " " " " " " " " " "	9-2½ " " " " " " " " " " " "
" " " " " " " " " " " "	10-2½ " " " " " " " " " " " "
" " " " " " " " " " " "	11-2½ " " " " " " " " " " " "
" " " " " " " " " " " "	12-2½ " " " " " " " " " " " "
" " " " " " " " " " " "	14-3½ " " " " " " " " " " " "

Discount on these prices 40, 10, 7½ per cent., plus 15c. per box.

No. 2 and larger	4 45
Snow shoes, No. 0 to No. 1	4 60
No. 2 and larger	4 45
Steel, No. 0 to No. 1	4 45
No. 2 and larger	4 20

Cut Nails—	Wire Nails—
2d 1 in.....\$4 10	1 in.....4 15
3d Fin. 1½ in. 4 10	1½ in.....4 10
3d 1½ in. 3 75	1¾ in.....3 70
4d 1½ in. 3 50	1½ in.....3 50
5d 1½ in. 3 50	1¾ in.....3 50
6d 2 in. 3 40	2 ".....3 40
8d 2½ in. 3 25	2½ ".....3 25
10d 3 in. 3 20	3 ".....3 20
20d 4 in. 3 15	3½ ".....3 15
30d 4½ in. 3 10	4 ".....3 10
40d 5 in. 3 10	4½ ".....3 10
50d 5½ in. 3 10	5 ".....3 10
60d 6 in. 3 10	5½ ".....3 10
	6 ".....3 10

Bar iron (basis)	2 50
Swedish iron (basis)	4 75
Sleigh shoe steel	2 85
Spring steel	3 25
Machinery steel	3 50
Tool steel, Black Diamond, 100 lb.	8 50
Jessop	13 00
Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge	3 75
24 gauge	3 90
26 gauge	4 00
gauge	4 10
Galvanized Iron, Apollo, 16 gauge	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10¾ oz.	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge.....	4 25
26 gauge	4 50
28 "	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	
Genuine Russian, per lb.....	11
Imitation "	07 to 08
Tinned, 24 gauge, 100 lb	8 00
26 gauge	8 05
Tinplate, IC charcoal, 20 x 28, box	9 50
" IX	11 50
" IXX "	13 50
Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 00
Canada plate, full polished.....	3 15
Sheet zinc, cask lots, 100 lb	7 00
Broken lots	7 50
Pig lead, 100 lb.....	5 50
Black iron pipe, ¾ inch	2 55
" " ¾ "	2 55
" " ¾ "	2 80
" " ¾ "	3 25
Black iron pipe, ¾ inch	4 20
" " 1 "	5 85
" " 1½ "	8 20
" " 1½ "	10 00
" " 2 "	14 00
Rope, sisal, 7-16 and larger, basis.....	11 75
Manila, 7-16 and larger, basis.....	15 25
Lath yarn	11 25
Solder	20
Axes, chopping.....	\$ 6 75 to 12 00
" double bits	12 00 to 18 00
Bluestone	5 25
Screws, flat head, iron, bright.....	.85 and 10 p.c.
Round "	80 p.c.
Flat " brass .....	.75 and 10 p.c.
Round " " .....	.70 and 10 p.c.
Coach "	70 p.c.
Bolts, carriage, ¾ or smaller.....	.60 and 5 p.c.
" 7-16 and up	55 p.c.
Bolts, machine, ¾ and under.....	.55 and 5 p.c.
" 7-16 and over.....	55 p.c.
Bolts, tire .....	.60 and 5 p.c.
Bolt ends .....	.55 and 5 p.c.
Sleigh shoe bolts	70 p.c.
Machine screws	70 p.c.
Plough bolts .....	.55 and 5 p.c.
Square nuts, case lots .....	.3c. discount.
" small lots .....	.2½ c.
Hex " case lots .....	.3c.
" smaller lots .....	.2½ c.
Rivets, iron.....	.50 and 10 p.c.
Copper, No. 8.....	32
No. 12	36
Coil chain, 3-16 inch.....	9½
" ¾ inch	7½
" 5-16 inch	5½
" ¾ inch	5½
" 7-16 inch	4½
" ¾ inch	4½
" ¾ and ¾ inch.....	4
Spades and shovels.....	.40 and 5 p.c.
Harvest tools	60 p.c.
Axe handles, turned, s.g. hickory, doz..	\$3 15
No. 1	1 90
No. 2	1 60
Octagon extra	2 30
No. 1	1 60
Files common.....	70 and 10 p.c.
Diamond	60 p.c.
Building paper:	
Anchor, plain	65c.
" tarred	70c.
Pure fibre, plain	67½ c.
" tarred	80c.
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....	30 p.c.
" military.....	15 p.c.
American R.F.	30 p.c.
C.F. pistol.....	5 p.c.
C.F. military.....	10 p.c. advance.
Loaded shells:	
Eley's soft, 12 gauge black.....	15 00
chilled, 12 gauge.....	16 00
soft, 10 gauge	18 00
chilled, 10 gauge	19 00
Shot, Ordinary, per 100 lb	6 00
Chilled	6 55

Powder, F.F., keg	4 70
F.F.G.	5 00
Tinware, pressed, retinned.	70 and 10 p.c.
" " plain	75 and 2½ p.c.
" " pieced.	
Japanned ware	37½ p.c.
Enamelled ware, white.	45 p.c.
" " Famous.	50 and 10 p.c.
" " Imperial.	50 and 10 p.c.
Green Wire Cloth.	1 55

PETROLEUM.

Water white American	27½c.
Prime white American.	25½c.
Water white Canadian.	25½c.
Prime white Canadian.	24½c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap.	5
Copper (heavy)	8½c. per lb.
Yellow brass (heavy)	7½c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead.	2c. to 2½c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead.	\$6 00 to \$6 50
Putty in bladder, 2½ lb., in keg of 100 lbs.	0 02½
Turpentine, pure in barrels.	0 87
Less than barrel lots.	0 92
Linseed oil, raw	0 52
Boiled	0 55

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine.	0 29
" " extra engine.	0 27
" " dynamo	0 35
" " black	0 22
" " cylinder.	0 50 to 0 75
(as to quality)	

Harness oil	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00½
" " 2nd pressure.	1 09½

LONDON METAL MARKETS.

From The Metal Market Report July 25.

Pig Iron—Scotch warrants Glasgow, closed at 51s 9d, unchanged since last issue. Middleboro No. 3 foundry closed at 43s, a rise of 1s 7 1-2d since last week.

Tin—Spot tin opened weak at £122 10s, futures £122 2s 6d, and after sales of 150 tons of spot and 220 tons of futures closed quiet at £122 7s 6d for spot and £122 2s 6d for futures, making price as compared with last issue £2 7s 6d spot and £2 2s 6d higher for futures.

Copper—Spot copper opened quiet at £57 5s, futures £57 5s, and after sales of 5 0tons of spot and 250 tons of futures, closed quiet at £57 3s 9d for spot and £57 2s 6d for futures, making price as compared with last week 7s 6d lower for spot and 7s 6d lower for futures.

Lead—The market closed at £11 15s, making prices as compared with last week 2s 9d higher.

Spelter—The market closed at £22 7s 6d, making price as compared with last week 5s higher.

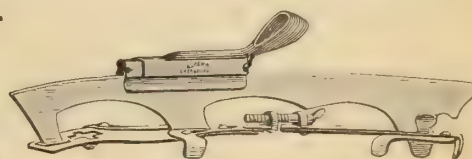
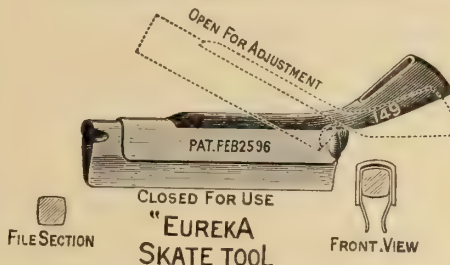
TESTING A WATER CURTAIN.

CHRISTIE, BROWN & Co., Limited, of Toronto, have just completed putting in a water curtain system on the Frederick street side of their large factory. The curtain protects the five storeys of the building. On Thursday of last week a test was made. A large number of business men who were considering the advisability of putting in such a system were present as well as the representatives of the leading fire insurance companies. The first test was made direct from the city water service by means of a 6-inch hose, and was successful. Each of the five rows of piping threw a good stream. As in case of a big fire the pressure on the water

mains would be decreased it was also decided to make a test by having one of the fire engines pump directly into the curtain. This did not prove successful. From the three storeys a good curtain of water was thrown. From the fourth storey pipes scarcely any water was emitted, while from the fifth storey there was none whatever. This was somewhat disappointing to all concerned, but it is expected that with some alterations each range of pipe will be made to work.

It should be explained that while the pressure from the fire engine was five pounds more water than from the water mains direct the diameter of the hose through which the water was forced from the engine was much smaller. Christie, Brown & Co. put in a water curtain system on the south side of their building some time ago.

The Eureka Skate Sharpener



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SMITH & HEMENWAY CO.,
206 BROADWAY, NEW YORK CITY.

Canadian Sample Room: 215 Coristine Bldg., MONTREAL
ALLEN C. JENKING, Canadian Manager.



Merrick, Anderson & Co.

117 Bannatyne Street East
WINNIPEG

The D. MOORE COMPANY, Limited
HAMILTON, CANADA

Heavy
Corrugated
Steel Lining

Patented

Will last at least twice as long as a very much heavier plain lining, as the air space between it and the body prevents the latter from becoming red hot and burning out. The corrugated lining retains and gives out considerably more heat than the ordinary lining.

MANITOBA DEPOT:

Merrick, Anderson & Co.

117 Bannatyne Street East
WINNIPEG

PAINT, OIL AND BRUSH TRADES

MASTER PAINTERS' CONVENTION.

THE first annual convention of the Canadian Master Painters' and Decorators' Association was held at the Windsor Hotel, Montreal, this week.

On Wednesday morning the first session took place, which was opened by a speech by L. Z. Mathieu, president of the Montreal association, who occupied the chair. An address of welcome was given by Mayor Laporte, which was followed by a paper on "Advantages of Membership in the Master Painters' Association," by Stewart N. Hughes, of Toronto. One of the main objects of the association, Mr. Hughes said, was self protection against unjust claims of labor unions.

The rest of the morning was devoted to enjoyment. The delegates drove to the Sherwin-Williams Co.'s establishment after the morning session, where a lunch was enjoyed. At five o'clock in the afternoon the delegates were driven around the mountain, and at the look-out on the mountain the group were photographed. In the evening the whole party went to the Arena, and enjoyed the performance of "Jack and the Beanstalk."

On Thursday morning the convention was continued. The following papers were read and discussed during the sessions: "Our City Fathers, their Relation to, or with, Labor Organizations," by A. M. McKenzie, Hamilton; "Varnish, its Uses, Methods of Manufacture, and Adulteration," by A. T. Blackwell, Toronto; "Necessity for Trade or Technical Schools," by W. E. Wall, Cambridge, Mass.; "The Purifying of Our Establishments from the Evils of Unionism," by J. N. Arcand, Montreal; "Competition in the Painting Business," by Jas. Phinmore, Toronto; "The Apprenticeship Question," by W. T. Castle, Montreal; and "Reminiscences and Comparisons in the Painting Business During the Last Half Century," by John Murphy, Montreal.

The following officers were elected for the ensuing year at the afternoon session, when it was decided that the next convention would be held in Hamilton, at about this time next year: President, J. N. Arcand; vice-president, A. M. McKenzie; secretary, Stewart N. Hughes; committee, Messrs. O'Hearn,

Brooke, Johnston, Morley and Stamp. Delegates were appointed to the international convention, to be held at Milwaukee. These are: L. Z. Mathieu, S. N. Hughes, and G. S. Faircloth.

After the afternoon session, the delegates were taken on special cars to the works of Watson-Foster Co., at Maisonneuve, where dinner was served by the officials of that company. In the evening a reception was held for the delegates in the parlors of the hotel.

In the rooms adjoining the convention hall interesting and attractive exhibits were shown of Ramsay's paints, Canada Paint Co.'s and Sherwin-Williams' paints, and the wall paper firms of Watson, Foster & Co., Stauntons Limited, and Colin McArthur, were represented, while demonstrations of Berry Bros. varnish were given upstairs.

The Analysis of Turpentine Oil.

FROM a lecture delivered by Dr. H. Herzfield at Hanover, Germany, it is learned that a number of turpentine substitutes are being put upon the continental markets, and that the investigation of these substitutes has occupied the attention of many analytical chemists. Dr. Herzfield has analysed many samples of divers degrees of purity. Specific gravity, polarisation and distillation tests are all employed. Among the adulterants employed were mineral oils, benzol, and pine oil; rosin oils was suspected, but not detected. The application of fuming and concentrated sulphuric acid has been found to afford a successful method of separating mineral oils. The presence of pine oil can be ascertained by means of potassium hydrate, or simply by the sense of smell. The lecturer also referred briefly to the analysis of turpentine as an agent in the denaturising of spirits. It is known that for this the specific gravity (0.855 to 0.875), the boiling behaviour (below 150 less than 5 ccm., as high as 175 at least 90 ccm.), and the capacity for mixing with water, are prescribed.

Refined Gas Tar,
Coal Tar,
Roofing and Paving
Pitch.



Lowest Prices.

The Imperial Varnish & Color Co.

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TORONTO, ONTARIO, CANADA.

ARE YOU IN DOUBT ?

We have nothing to say against other makers' paints; we have time to talk only our own.

NEW ERA PAINTS

are thoroughly reliable—a strictly first-class article. There has never been a man yet who hasn't been pleased with NEW ERA PAINTS after a trial of them. This applies to both seller and user. Send for our proposal to dealers.

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BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street

A trial order will prove to you that there is nothing better than

SOLARINE Metal Polish

Sells wherever introduced.
Only try it and convince yourself.
For Ontario, address:

HENRY F. FALKINER, 60 George St., Toronto

Linseed Oil

To-day's price in London is £18 1s od. I offer 50 barrels, raw, at £17 15s od, c.i.f. Montreal, which price with duty is less than 41c. per gallon. Also 50 barrels refined at £19 5s od, c.i.f. Montreal.

J. W. L.,

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Montreal

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Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES

MONTREAL.

Get your GLUES from

The GROVE CHEMICAL CO., Limited,

Appley Bridge, Lancs., England.

Our ordinary grades are better than ordinary, and we can supply special makes for special purposes. SCOTCH GLUES, BOX GLUES, COLOGNE GLUES for Paper Makers. SIZE of all kinds. Send your name for our printed matter.

We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

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MONTREAL

LONDON

OTTAWA

WINNIPEG.



Have you a Cranky Customer ?

Of course you have. Perhaps you have several who are confirmed fault finders. Sell them ISLAND CITY paints and they will have to work overtime to find anything wrong.

P. D. DODS & CO., Montreal, Toronto, Vancouver

Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, July 28, 1904.

CONSIDERABLE activity exists in the paint and oil markets this week. Large orders have been received from manufacturers of agricultural implements and carriage and wagon makers, which would show that these firms are very busy catching up and preparing for an unusually big trade in their respective lines. The demand in all lines is seasonable; and manufacturers are well satisfied with the volume of business.

Linseed oil is firm, at last week's price, while turpentine continues steady. The latter advanced 1c a gallon last week, but a typographical error made it read 10c, which is herewith corrected. The demand for paris green has fallen off somewhat, while all other lines are moving fairly well. Prices remain the same throughout.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

Putty—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 82 1-2c per gallon; two to four barrels, 81 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

Linseed Oil—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boil-

ed, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c; 25 lb. drums, 15 1-4c; 1 lb. packages, 16c; 1-2 lb. packages, 18c; 1 lb. tins, 17c. Terms 2 per cent. discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, July 28, 1904.

FOR this season the demand for mixed paints, varnishes and dry colors is very good. White lead continues active. Paris green is also

selling very well. This week the 1c advance in turpentine, made last week in local quotations, but too late for our market quotations is noted. The anticipated advance in linseed oil has taken place, and the market is firm at the advanced quotations. Other than in turpentine and linseed oil there has been no change in market quotations.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b.



"Anchor" is the Brand
Behind which we stand

In Liquid House Paints, as well as other lines of our manufacture, "Anchor Brand" means the "Best Brand" on the market. The White Lead used in Anchor Liquid Paints is BRANDRAM'S B. B. GENUINE, the world's standard for 186 years.



HENDERSON & POTTS, Limited, Mfrs., Halifax
HENDERSON & POTTS CO., Ltd., Mfrs., Montreal

McArthur, Corneille & Co.

MONTREAL

Glue and Gelatine

An extensive assortment, to suit all requirements.
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

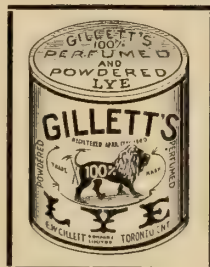
White Lead, Oils and Colors,
Prepared Paints, Window
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE
Imperial French Green
of JOHN LUCAS & CO.,
PHILADELPHIA.

And CELEBRATED
English Varnishes
of CHAS. TURNER & SON,
LONDON.

Please mention HARDWARE AND METAL when writing.



GILLETT'S LYE

—IS GOOD FOR—

Washing Dishes

Use one teaspoonful to a gallon of hot water. Dishes
can be washed so in half usual time.

SELL GILLETT'S LYE

FOR

Washing Dishes

E. W. GILLETT COMPANY LIMITED
TORONTO

Silverware that sells



**It's
a Credit
to All**

STANDARD SILVERWARE

is emphatically the best silverware, next to sterling,
that is made in any country.

STANDARD SILVERWARE

is sound at heart—the best Britannia metal known
to the trade is the base. The plate is pure silver
generously applied.

STANDARD SILVERWARE

is designed by artists of talent, is worked from be-
ginning to end by craftsmen of long training. The
finished article is beautiful and fit for the service
required of it.

STANDARD SILVERWARE

endures because good. It gives credit to maker
and seller, and satisfaction to buyer.

You should send for our large and very hand-
some catalogue—FREE.

STANDARD SILVER CO.

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Hayter St., TORONTO

STOVE PIPE VARNISH

BRILLIANT BLACK IN STONE
BOTTLES—TWO SIZES—PACKED
IN BARRELS.

STOVE PIPE ENAMEL

IN LEVER-LID TINS—FOUR SIZES.

STOVE PIPE VARNISH

"CRYSTAL BLACK"—ONE SIZE—
LEVER-LID TINS, WITH BRUSH
ATTACHED.
A HANDY PACKAGE.

STOVE PIPE ALUMINUM

FOR SILVERING ALL METALS—
SIX SIZES—

Consult the Catalogue and
kindly order early.

**THE
CANADA
PAINT
COMPANY
LTD**

point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

English Paris Green—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

Window Glass.

MONTREAL.

A fairly good business is reported by jobbers in this line. There is no change in price this week, but the reduction noted last week still holds. It amounted to 10c on 50 feet, and 25c to 50c on 100 feet. This reduction is due to the changes made in the tariff recently. The selling prices now are: First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70 seventh do., \$5.20, and eighth do., \$5.70. The discount on 50 feet is 20 per cent, and on 100 feet 33 1-3 per cent. There has been no change in prices for diamond star or double thick. First break, 50 feet, \$2.30; second do., \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$9; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

TORONTO.

Trade is very good in this line. Prices are firm, and quotations may be put up. However, at present last week's quotations hold. We quote as follows: Star, first break, at \$3.80 per 100 feet, and Double Diamond, first break, at \$5.06. Discount, 15 and 20 per cent.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " 1 year.....	10 00

SITUATIONS VACANT.

WANTED—For Manitoba—Experienced tinsmith; knowledge furnace work necessary. Apply, with references, to Merrick, Anderson & Co., Winnipeg. (31)

WANTED FOR MANITOBA—Young man, tinsmith, with four to five years experience. must understand stoves and hardware; wages \$50 per month; steady work, providing satisfactory. Apply with references to Merrick, Anderson & Co., Winnipeg. (31)

SITUATIONS WANTED.

BY A1 hardware office man; long experience; would take partnership; best of references. Address Box 160, HARDWARE AND METAL, Toronto. (31)

MANAGER, traveller or assistant—thorough knowledge hardware, paints and colors; 20 years' experience; thoroughly energetic; very smart salesman; total abstainer; age 35; highest credentials. "Dominion," HARDWARE AND METAL, Montreal. (31)

MANAGER, thorough knowledge hardware; 20 years' varied experience; used to organization and administration of a large corporation; undoubted ability; total abstainer; age 35. "Independence," HARDWARE AND METAL, Montreal. (31)

YOUNG man of good character wishes to learn hardware business; references; address Box 162, HARDWARE AND METAL, Toronto. (31)

FOR SALE.

HARDWARE STOCK—\$3,000—Not \$5 worth dead stock; for sale at 80c. on invoice; can move or continue; established and paying business in good country. Box 163, HARDWARE AND METAL, Toronto. (33)

BUSINESS CHANCES.

HARDWARE business wanted in live city or first-class town of not less than five thousand population, located in good farming community. Apply Box 146, HARDWARE AND METAL, Toronto. (25)f

HARDWARE business for sale, in good live village in Western Ontario; good clean stock of about \$2200; owner must sell on account of ill-health. Apply Box 161, HARDWARE AND METAL, Toronto. (31)

RETAIL hardware business for sale; one of the largest and in best location in Toronto; largely cash business; in good running order; turnover for 1903 over \$35,000; can easily be increased to \$50,000; stock and tools about \$9,000. For particulars and terms address Box 152, HARDWARE AND METAL, Toronto, Ont. (28t)

Have you
tried it?
Tried what?
**SELLING
MANTELS.**



This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
76 YORK ST., TORONTO.

WE WANT WORK

**Old Stove Parts Re nickeled
Like New.**

Put your Stove parts in a box and send
to us. We do the rest.
Good as the best. Cheap as the cheapest.

Long Distance Phone, Main 2993.

FAIRGRIEVE MFG. CO.,
TORONTO.

**A PERMANENT
and Handsome Roof.**



Arrow Brand Asphalt Ready Roofing.

Will bring you profitable trade and satisfied customers. Comes in rolls ready to
lay, all ready covered with gravel. Requires no experience to lay, and lasts
for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - MONTREAL.
Sole agents being appointed in each district. Write to-day

When in want of

**Hayfork Pulleys,
Barn Door Hangers,
Jack Screws,**

**Mrs. Potts Irons,
Diamond Dampers,
Etc.**

Order from

The H. R. Ives Co., Ltd., - Montreal

Pretty Good Stuff

We don't know of a better

FURNACE CEMENT

than Sterne's. Stands more heat than iron, will keep soft longer, get harder,
and stand more heat than any other cement made. Bbls., tubs, cans.

Send for circular and price list.

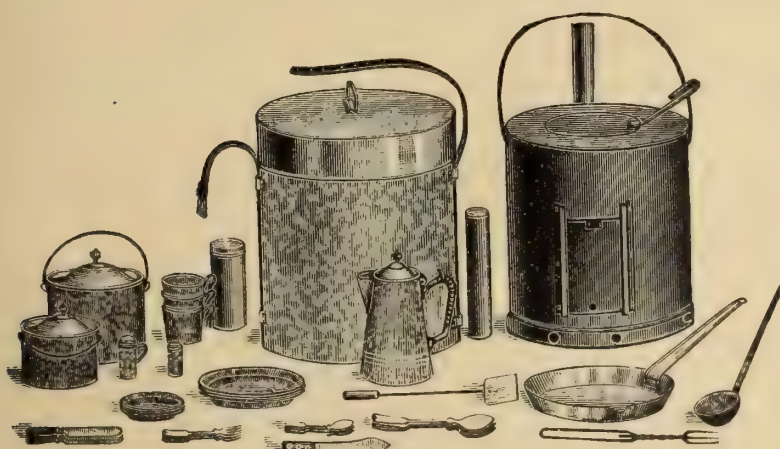
G. F. STERNE & SON, Makers, Brantford, Ont.

CAMPING OUTFITS

for Fishing and Camping
Parties, Picnics, etc.

SUPPLIED THROUGH THE TRADE ONLY.

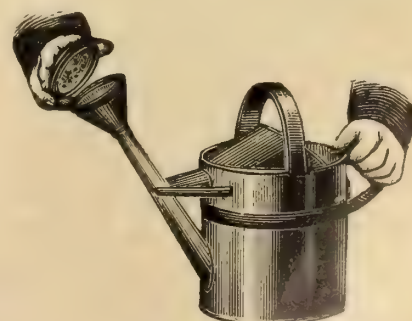
Comprising 55 Articles, for 6 Persons.



ALSO FITTED OUT FOR 3 PERSONS.

- 1 Large Galvanized Bucket, with strap and loose cover.
- 1 Wood Cook Stove, with cover, lifter, elbow and loose bail.
- 1 Tin Fry Pan, with folding handle.
- 1 Colonial Enamelled Pail, 400.
- 1 Colonial Enamelled Pail, 800.
- 6 Colonial Enamelled Soup Plates, 9 inches.
- 6 Colonial Enamelled Dinner Plates, 7 inches.
- 6 Colonial Enamelled Mugs loose handle.
- 6 Table Knives, good quality.
- 6 Table Forks, nickel plated.
- 6 Table Spoons, nickel plated.
- 6 Tea Spoons, nickel plated.
- 1 Salt Caster.
- 1 Pepper Caster.
- 1 Colonial Coffee Pot, 013 1/2.
- 1 Round Slip Cover Tin, 1 lb.
- 1 Round Slip Cover Tin, for cutlery.
- 1 Butcher's Knife.
- 1 Daisy Flesh Fork.
- 1 Cake Turner.

55



WATERING POTS Patent Rose

Plain, Japanned, Green, or Galvanized.

Made in seven different sizes, from 1 to 16 quarts

The THOS. DAVIDSON MFG. CO. Limited. . . . MONTREAL.

HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, July 28, 1904.

DEALERS in these goods report a slight falling off in the volume of business this week, but to a much less degree than what is usually expected. Conditions on the whole are entirely satisfactory. Lead pipe and soil pipe

are particularly active while iron pipe is in good demand. There is no change in price.

Range Boilers—Orders are being received in fair numbers. Prices as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—A very brisk market in lead pipe this week. Prices are firm at former quotations. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs. extra; f.o.b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—A particularly active demand continues for these goods. Discounts continue as follows: Light soil pipe, 3 to 6 in., 50 and 10 per cent; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

Iron Pipe and Fittings—Iron pipe is in good demand, but as before exact prices cannot be quoted as cutting still continues. Prices are quoted on application, as the real conditions cannot be arrived at. Subject to concessions, we quote nominal prices as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Solder—There is no noted change in the price of solder this week. Bar solder is quoted at 17 1-2c, and wire at 18c.

Soldering Irons—Prices are as follows: 1 to 1 1-2 lbs., per lb., 37c; 2 lbs. and over, 34c.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, July 28, 1904

QUOTATIONS on this market remain unchanged since last week.

Market conditions are similar, although some dealers report a dullness in trade last week. Dealers rather expected that with so many plumbers in the city from outside points, not a few substantial orders would be left. This, however, did not turn out as was expected. A little business was done with a few of the plumbers. Cutting in iron pipe and fittings still continues and trade is being demoralized in those lines.

Lead Pipe—Business has been fair, with a slight slackening off. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—There is no change in quotations. Prices are easy. A slight falling off in trade was noted during the week. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

Iron Pipe and Fittings—The competition in these lines is not quite so keen as it has been. Prices, however, remain at the same low level. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1-2 to 70 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

Iron Pipe—The low prices noted last week still prevail. A good trade is being done at the figures. We quote f.o.b. Toronto as follows: Black pipe, 1-2 in., \$1.85 to \$1.95; 1-4 in., \$1.90 to \$2.05; 3-8 in., \$2 to \$2.25; 1-2 in., \$2.25 to \$2.35; 3-4 in., \$2.85 to \$3; 1 in., \$4 to \$4.25; 1 1-4 in., \$5.75 to \$6; 1 1-2 in., \$7 to \$7.25; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.65 to \$2.80; 3-8 in., \$2.80 to \$3; 1-2 in., \$3.15 to \$3.25; 3-4 in., \$4 to \$4.10; 1 in., \$5.90 to \$6; 1 1-4 in., \$8.25 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

Enamelled Ware—Prices are firm, and an active trade is being done. We quote: "Standard," 5 1-2 feet, 2 1-2 inch rolled rim, first quality, at \$21.60; second quality \$16.35.

A VARNISH SUCCESS



Here's a line to bring you good returns, handsomely put up in lithographed cans, a great varnish for the general public and the painter as well. The price is low, the quality high.

RAMSAY'S KAURINE VARNISH

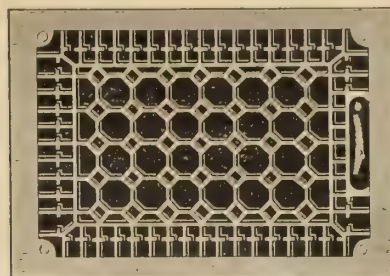
is the result of careful study at our varnish works. It is particularly a fine interior varnish. It will do its work to satisfaction and we will sell it on our guarantee. The price is very reasonable and it yields a good profit. Packed in handy cases.

A. RAMSAY & SON
MONTREAL

EST'D
1842

VARNISH
MAKERS

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.

It would probably be an easy matter for you to install a steam or hot water heating system in a building for less than what the Oxford System would cost. But are you only looking for one order? The systems comprised of

Oxford Radiators and Oxford Hot Water or Steam Boilers

are the kind that give satisfaction. They will live a credit to you. Their good qualities in operation are a standing advertisement for you. Let's talk it over.

THE GURNEY FOUNDRY COMPANY, Limited

TORONTO

WINNIPEG

VANCOUVER

—CORRESPONDENTS:—

THE GURNEY-MASSEY CO., LIMITED
MONTREAL, QUE.

THE GURNEY STANDARD METAL CO., LIMITED
CALGARY, ALTA.

PLUMBERS MAKE MERRY.

"ALL work and no play makes Jack a dull boy"; at least so thought the master plumbers attending the convention of the National Master Plumbers' Association, held at Toronto on July 20, 21 and 22.

On the morning of the first day there was a reception of the visiting delegates. In the afternoon the visitors were entertained to a drive around the city. The same evening there was the banquet. The next morning the plumbers met in business session, the really important part of the convention. At noon, on the following day the business end of the convention was finished.

The plumbers had worked hard and were in a mood to enjoy the sport and jollity of an afternoon by the lake. The reception committee of the convention had arranged for a picnic and games at Long Branch, the grounds being reached by trolley car. The fears of Hardware and Metal's representative that the press of work might make "Jack Plumber" a "dull boy" were soon dispelled. The plumbers can play as well as work. The number at the picnic would probably be over 400, including ladies and children. The Toronto plumbers were there in force, and supply house representatives were in evidence everywhere.

It seemed to be everyone's aim to outdo the other in making fun.

The program of games included foot races for girls of different ages and boys of different ages with prizes. There was also a ladies' foot race. The event of the afternoon, however, was the baseball match between the plumbers and the supply men. Just before this event the second of the daily bulletins of the convention proceedings, issued by Hardware and Metal, arrived upon the scene. The contents of these caused no little amusement and friendly chaff for a time. Then the grounds were cleared for action. Above the din was heard the voice of the "Golden Tongued Orator," W. H. Meredith, declaring that the ladies simply must retire to the shade of the spreading elm trees. At last the ground was cleared and the game started.

The plumbers had the best of it all the way through. They had the best battery, and the ball as delivered from the fingers of the plumbers' twirler located

the plate somewhat oftener than from the supply men's. The supply men, however, had a few towers of strength in their company who handled themselves and the ball well. It was a tough struggle, and the supply men put up a plucky fight. The game closed with the score 8 to 3 in the plumbers' favor. So enthusiastic was one supply man that he implored the plumbers to play another inning or two, declaring that they would do their best to win. However, the plumbers were relentless, and refused to play again.

While the ball game was in progress some of those not deeply interested in the ethics of baseball found amusement in the dance in the pavilion, while others did credit to the good things provided at the hotel by the committee.

During the evening the strains of music floated incessantly upon the air, while in the pavilion the feet of the dancers seemed never to grow weary.

A Seasick Crew.

A FACETIOUS member of the Dominion Radiator Co.'s excursion party to St. Catharines last week contributes the following account of that function:

A ludicrous finale to the master plumbers' convention was held aboard the steamer Garden City, bound for Port Dalhousie, chartered by the Dominion Radiator Co. for the good cheer of their employes. Their pull with the weather man was not as good as they claimed,—or was it a put up job to put those plumber delegates under the weather? It was the eccentricities of the Garden City that showed it, and the actions of John of Ottawa and Crump of Halifax and three hundred and ninety-nine others proved it. Mac declares his appendicitis went with the last acrobatic heave. Sedate Crump, mournful George of Halifax, and blithe Freddy of Ottawa, with unspeakable emphasis, could be heard muttering about the sweets of home and the terrors of the Garden City. A braver lot of men never left Toronto by boat; a more determined lot of men never returned to it (by rail).

It is since rumored that a programme to visit the Old Country by the aforesaid gentlemen has been postponed until an aerial voyage is possible. Sure, Mike will get his own back then; pop, peanuts and candy will be his diet; to him it will be the possible approximate to ethereal bliss. He is a good man, and

those who know him will forgive a lot, but they won't forget his little joke of the 23rd.

That boat radiated all the way, casting off superfluous high balls, collins' and manhattans, scrambled eggs, sirloins and meal tickets, leaving only the semblance of their owners. Blessed were they that their wives and sweethearts did not get one look at them. What would Carrie Nation have said? Ugh! Blue noses, purple cheeks. Radiators are all right; seasickness is another story.

Exhibit of Borden Co.

DURING the days of the convention of the National Plumbers' Association in Toronto last week, the Borden Company, Warren, O., had an attractive exhibit of solid and adjustable threading tools, cutting pipe and bolt threads by hand and power at the Iroquois Hotel. R. M. Stover represented the company and attended the reception of the visiting delegates, where he introduced his firm and the goods manufactured by them. This was an enterprising thing for the Borden Company to do, and is deserving of commendation. Mr. Stover distributed a handsome little catalogue illustrating and describing the die stocks manufactured by the firm.

Building Permits.

TORONTO.

H. W. Love, dwelling on Fifth avenue, \$7,000.

A. H. Read, dwelling on Shaw street, \$3,000.

Geo. Daniels, dwelling on Paton road, \$3,000.

J. Drummer, dwelling on Millicent street, \$4,000.

Robt. Dale, dwelling on Delaware avenue, \$2,500.

J. I. Case, warehouse on Dufferin street, \$6,000.

Rev. C. A. Yeager, rectory, Bathurst street, \$2,500.

H. L. Gardiner, dwellings on Huron street, \$3,000.

Mr. Green, dwelling on Macdonell street, \$2,200.

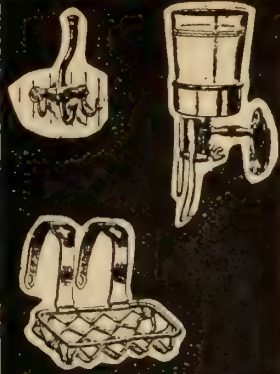
John H. Walker, dwelling, Concord avenue, \$1,800.

Robertson Bros., building on Richmond street, \$1,000.

W. T. Mitchell, dwelling on Hamburg avenue, \$1,000.

Hilton Bros., dwelling on Gerrard street, \$2,500.

Mr. Muffett, pair dwellings on Euclid avenue, \$3,500.

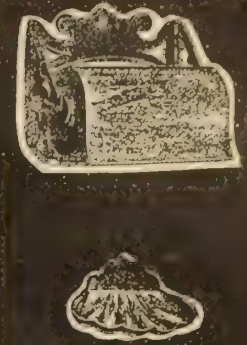


ARE YOU GETTING YOUR SHARE OF THE BATHROOM SPECIALTY TRADE ?

You can get it all in your vicinity if you carry our line of bathroom fixtures because it offers the best values in Canada.

Write for our proposition.

JAS. MORRISON BRASS MFG. CO., LIMITED,
TORONTO, ONT.



Imperial Bank, alterations to bank.
W. Bulmer, two dwellings on Dundas street, \$3,800.

J. H. Nixon, dwelling, 258 Sorauren avenue, \$1,300.

M. A. Marshall, dwellings on Montrose street, \$2,400.

R. Saunders, dwelling, No. 361 Delaware avenue, \$2,000.

Walter Marks, dwelling, No. 11 Hepburne street, \$1,500.

W. B. Charlton, buildings on Kippendavie avenue, \$1,200.

A. M. Craig, office and dwelling on Queen street, \$5,000.

M. S. Crocker, pair dwellings on Ossington avenue, \$4,000.

A. H. Elliott, pair dwellings on Cottingham street, \$5,500.

Jethro Crang, three dwellings on Wells street, \$6,000.

H. M. Patton, two dwellings, Lansdowne avenue, \$8,000.

Michael Fennell, dwelling, No. 108 Farley avenue, \$3,500.

Stephen Smith, two dwellings, Brooklyn avenue, \$3,200.

W. A. McTaggart, three dwellings on St. Helens avenue, \$8,400.

Jas. Macdonald, pair dwellings on St. Clare's avenue, \$5,500.

E. Willfong, brick factory, 180 to 186 Sorauren avenue, \$10,000.

Suckling & Co., warehouse on Wellington street west, \$8,000.

Office Specialty Co., warehouse on Wellington street, \$20,000.

Chas. E. Ireson, pair dwellings on Macpherson avenue, \$4,000.

A. E. Booth, pair dwellings, 252 and 254 Davenport road, \$6,000.

A. R. Clarke & Co., additions to works on Eastern avenue, \$1,000.

Chas. Mould, two dwellings on Bloor and Gladstone streets, \$5,000.

Geo. Wellings, alterations to dwelling, 17 Austin avenue, \$1,000.

Rolph & Clark, warehouse, corner Simcoe and Adelaide, \$30,000.

E. & S. Currie, Limited, warehouse on Wellington street, \$100,000.

R. C. LeVisconte, alterations to dwellings on Sherbourne street, \$4,000.

Macdonald Mfg. Co., warehouse and office on Catharine street, \$15,000.

Calvert & Dwyer, addition to office, 117 Wellington street west, \$17,500.

J. H. Kennedy, storehouse and showrooms on Queen street west, \$3,000.

Frank Stanley, alterations to warehouse, 11 Temperance street, \$1,000.

Wm. Davies Co., alterations to store and dwelling 100 and 102 Queen street east, \$2,200.

Dominion Government, four-storey brick storehouse (addition to), on Esplanade, \$40,000.

L. C. Sheppard & Co., dwelling on Mutual street, \$5,400; also dwelling on Davenport road, \$5,400; also two dwellings on Beatrice street, \$7,200.

MONTREAL.

Lamer estate, one dwelling, \$3,000.

W. Clark, two houses on Ryde street, \$3,500.

J. O. Gagnon, two houses on Rylwan street, \$4,800.

L. Renaud, one dwelling on Champlain street, \$3,000.

M. Moffatt, one dwelling, 197 Bishop street, \$5,000.

D. Paquette, one house, 15 Sherbrooke avenue, \$1,200.

H. Fortier, one stable, 112 Panet street, \$3,000.

G. Reinhardt, one building on Dufferin street, \$1,600.

Jos. Feron, one house, 1101 St. Hubert street, \$3,500.

P. Meloche, one house on Lagauchetiere street, \$4,000.

Dr. P. P. Renaud, three houses on Plessis street, \$7,500.

Mrs. M. Torrance, alteration to store, 31 Duke street, \$5,500.

J. W. Gurmond, two houses on Avenue Hotel de Ville, \$12,000.

H. E. Stearns, one residence, 6 McGregor avenue, \$20,000.

H. Bourgie & Co., one house on Frontenac street, \$2,000.

Mrs. C. A. Briggs, one dwelling on Dorchester street, \$5,000.

Jos. Vezina, alterations on dwelling, 122 Beaudry street, \$1,000.

R. G. Reid, alteration on residence, 275 Drummond street, \$12,000.

Jos. Jobin, alterations on apartment house, 16 Haule street, \$2,500.

Congregation Notre Dame, one school on St. Antoine street, \$13,000.

Theo. Labatte, alteration on residence, 208 Drummond street, \$8,000.

Montreal Street Railway Co., one car-barn on DeFlormont street, \$46,000.

Ogilvy estate, one store, corner St. Catherine and Victoria streets, \$65,000.

C. McArthur, alterations on store, Stanley and St. Catherine streets, \$1,000.

Mrs. W. Brennen, alterations on apartment house, 200 St. Hubert street, \$3,275.

Building Notes.

A new office building will be erected on St. Peter street, Quebec.

Tenders are being called for the building of an immigration hall in Winnipeg.

A new building is to be erected in Vancouver for M. P. and J. A. Thompson.

A new Methodist church is to be erected at Bruce Mines, Algoma District, Ont.

A new Presbyterian church is to be erected in Depot Harbor, Ont., to cost \$2,500.

A \$4,000 residence is being built by M. Desrosiers, Granville street, Vancouver.

Thomas Lovejoy, Hamilton, will erect a dwelling on Cannon street, to cost \$1,600.

The addition to the Centre Methodist Church, Dundas street, London, is now in course of construction.

A large business block, 100x70 feet will be erected by Manion, Graham and Horne on Victoria avenue, Fort William, Ont.

The Central Canada Insurance Co. will erect a fine office building in Brandon, Man. Tenders are now being called for.

A new business block is being erected on Hastings street, Vancouver. The cost of the building will be \$18,000. It is being built by Center & Hanna.

ART GLASS

UNEXCELLED
MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.
Registered Attorney U.S. Patent Office,

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CUN SHOP and MODEL SHOP

Warren White Sulphur Springs,
Totten P.O., Virginia.

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OIL AND COLOURMAN'S JOURNAL

for news of the Oil, Paint, Soap, Varnish,
Chemical and Drysaltery Trades.

Subscription, \$2.00 per year from date.
Sample for 10 cents.

SCOTT, GREENWOOD & CO.

19 LUDGATE HILL - LONDON, ENG.

"COMET"

Brand

Galvanized Sheets

are made of British Steel, manufactured
at the works of

W. Gilbertson & Co., Limited

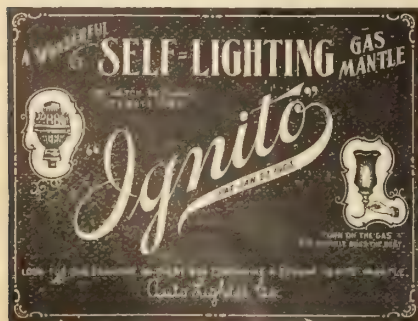
Pontardawe, Wales.

No better quality made. Price low.

AGENT

Alexander Gibb, - Montreal

MODERN MAGIC!



No more matches required to light the gas.
The "Ignito" Mantle lights when the gas is turned on.
Write for booklet and samples.

The **International Gas Appliance Co., Limited**
164 BAY STREET, TORONTO, Canada

STOVES AND TINWARE.

Stoves and Furnaces.

WHAT are the furnace men doing now? What are the retail hardwaremen doing with their stove business? This is the time for spotting the places where furnaces are needed for next Winter. The hardwareman who also does a furnace trade has a chance to do a little "feeling." The customers that come into the hardware department may have a furnace in the house or they may not. Perhaps their furnace is satisfactory. Perhaps it is not. These are the facts for the merchant to discover. If the customer hasn't a furnace, there is a chance for making an installation. If he has one, but that one has worked unsatisfactorily last Winter, there is a big chance that he will want it altered in some way, or perhaps if the trouble with the furnace is very chronic a new installation will be necessary.

The merchant should ever be on the lookout to do a little missionary work for his furnace business.

Building operations in most places this year have been very active. For each new building some kind of heating apparatus will be necessary. The system of heating will be installed according to the class of house and according to the desire of the owner. In some steam heating will be used, in others hot water, in others the hot air furnace, and in others perhaps box or coal stoves. The merchant should not wait for the owners to come to him; he should go to the owners. He should make it a point to keep himself informed regarding all building operations both in the town or city, and in the surrounding country districts.

Farmers are every year paying more and more attention to the comfort of their homes, and one of the important points of improvement is in heating. Hot air furnaces are becoming very popular among the farmers, and in a new farm house the chances of a furnace being installed are very good.

Fall is approaching. If he has not already done so, it is time the hardware merchant was prepared for his fall stove trade. The merchant should during past seasons have obtained some idea of the tastes of his community. Keeping that in mind he should make an investigation as to the merits of the different stoves and ranges turned out by the different stove founders. He should be on the lookout for something new and more up-to-date. Because a certain style of stove was the best on the market a year ago, does not say that it is still so. Improvements are being made all the time, and if the merchant wishes to keep up with the times he must investigate. Stoves are a line that can be advertised to advantage both through the local papers and by direct advocating to customers. A demand can very often be created, and in such a case there is always room for advertising.

Ink for Marking Tinware.

A good ink for marking tinware is composed as follows: Reduce asphalt or black varnish with turpentine to the desired consistency, and keep it in a corked bottle.

Another ink may be made by reducing shellac varnish with alcohol and adding a sufficient quantity of lamp black. This forms a jet black lustrous ink, which is insoluble in water, but can be removed by a drop of alcohol. For marking on tin plates mix together, without use of heat, one part of pine soot with sixty parts of solution of nitrate of copper in water.—Manual of Receipts.

Smoke Pipe for Wood Furnaces.

A WRITER in "House Chimneys," who had a great deal of trouble with condensation in smoke pipes from wood furnaces, gives the following rules for overcoming it:

1. By positively refusing to connect even a 36-inch wood furnace with anything less than a 9x9 chimney flue.

2. By using 8-inch smoke pipe with the smallest furnaces, and 9- and 10-inch pipes on the larger sizes.

3. Run all smoke pipes with as few turns as possible, and make these turns as free from friction as can be done by using four or five piece elbows; also try to run the smoke pipe up straight from the furnace and carry over to the chimney on the upper floor, thus not only giving a better draft, but also utilizing the heat from the smoke pipe where it is most needed.

By following the above rules pipes can be run to the third storey with no ill effects.

Using Old Cans.

It was noticed in Montreal recently, that on certain back streets and lanes, children were engaged gathering tin cans of all sizes from the rubbish and garbage heaps. The curiosity of the authorities was aroused, as they thought it possible that these cans were being used over again to hold canned goods. An investigation followed, which revealed the fact that suspicions in this direction were unfounded. It was found that some parties were buying these cans from the children and conveying them to the north end. Here they were heated and the solder melted and run into moulds which was sold to tinsmiths. The tin was sold to a paint company to be used in their manufactory.

P-H**"CROWN" BRAND
PIPE.****PIPE THAT IS PIPE.**

NIPPLES and COUPLINGS

WITHOUT A FLAW.

Every Nipple has precisely the same number of threads on each end.
All threads cut absolutely to Brigg's Standard Sizers.
All Nipples made from **P-H** Crown Pipe and not from scrap.
It pays abundantly to use them.

Page-Hersey Iron & Tube Co., Limited, Guelph, Can.
MAKERS OF WROUGHT IRON PIPE.

NOT IN THE COMBINE

Ask for Prices of
Shovels, Spades, Scoops, Etc.
WE HAVE A LARGE STOCK.

CANADA HARDWARE CO., Limited, Montreal

THE "KELLY" WARM AIR FURNACES

ARE PERFECT IN EVERY DETAIL

They are substantially built, and stand the assaults of time and rough usage better than anything yet produced in the furnace line.

As Heaters they are unexcelled.

Made in four sizes, with firepots 17, 19, 22 and 25 inches in diameter.

BURN COAL OR WOOD.

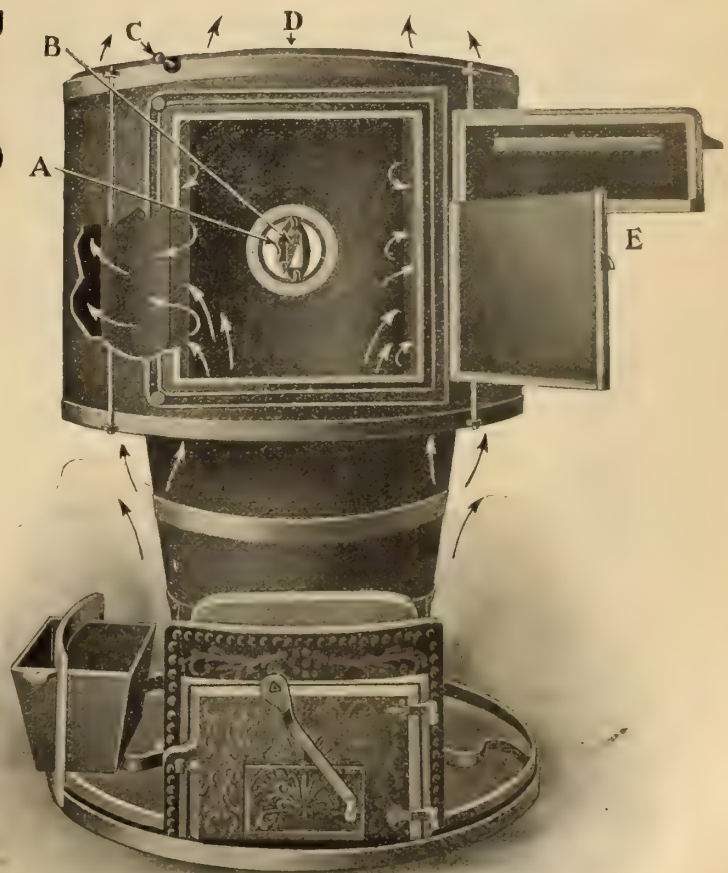
FULLY GUARANTEED.

THOUSANDS IN USE.

TIME TESTED.

Get in line and make a furnace reputation for yourself by handling the "Kelly."

Descriptive pamphlet forwarded upon request.



GUELPH FOUNDRY CO.
LIMITED
Guelph, Ont.

Western Representatives:

E. G. LOW & CO.

Market St., Winnipeg, Man.

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE Durham Mfg. Co., makers of the Oxford Cream Separator, whose factory at Durham, Ont., was built a year ago, are organizing sales agencies in the Maritime Provinces and are meeting with gratifying results in that direction. The firm, which is under the able management of Mr. T. Livingston, is employing over forty-five hands at present.

* * *

F. S. Darling, Canadian Pacific Railway engineer in charge of all construction work east of Winnipeg, has given out the following information regarding the proposed Toronto to Sudbury line: "The proposed Canadian Pacific Railway line from Toronto to Sudbury will cost \$8,000,000, and of this amount \$2,000,000 will be required for the construction of 58 miles from Romford to Byng Inlet. We have decided that the grade of the entire route shall in no place be more than three-tenths of 1 per cent. There will not be any curve higher than 4 per cent. Before the end of the month 2,500 men will be at work on the portion of the line between Romford and Byng Inlet, where the rocky nature of the country makes it cost over \$35,000 a mile. In addition, a large number of bridges will have to be constructed, the one at the French River alone to cost \$300,000."

NOTES.

The new plant of the Sun Portland Cement Co., Owen Sound, is now in operation.

The works of the International Portland Cement Co., at Hull, Quebec, are now very nearly completed. The concluding stages of construction are being gone through.

COMPANIES INCORPORATED.

The Hygiene Ice Co., of Ottawa, Limited, Ottawa; capital, \$100,000; purpose, to manufacture and deal in ice. The directors are: C. B. Pratt, R. P. Gil-mour, and T. Pegg, all of Ottawa.

The Brazilian Securities Co., Limited, Toronto; capital, \$100,000; purpose, to deal in bonds and debentures. The directors are: J. S. Lovell, Wm. Bain, E. W. McNeill, R. Gowans, and R. Richardson, all of Toronto.

The Bertram Brake Co., Limited, Toronto; capital, \$40,000; purpose, to manufacture and sell car brakes. The directors are: C. J. Leonard, G. Gibson, Chas. Heath, F. Pole and C. S. Robertson, all of Toronto.

Armour, Limited, Toronto; capital, \$25,000; purpose, to carry on a general mercantile and manufacturing business. The directors are: J. S. Lovell, Wm. Bain, Robert Gowans, E. W. McNeill, and R. Richardson, all of Toronto.

The Fleming-Hutton Co., Limited, Toronto; capital, \$25,000; purpose, to sell and deal in earthenware, china, lamps and glassware. The directors are: T. C. Fleming, Toronto; F. H. Hutton, A. E. Hutton, St. Mary's, Ont.

Knitted Goods, Limited, Toronto; capital, \$40,000; purpose, to manufacture and deal in cotton and woolen goods. The directors are: T. Prest, Toronto Junction; A. R. Moore, R. G. Hunter, H. H. Beasley, and G. Banks, all of Toronto.

Wilfrid Delorme & Co., Limited, Montreal; capital, \$40,000; purpose, to carry on the business as leather and commission merchants. The directors are: W. Delorme, A. Delorme, E. Delorme, L. J. Ethier, and J. A. Ronette, all of Montreal.

The Capital Fuel Co., Limited, Ottawa; capital, \$75,000; purpose, to deal in wood, coal, coke and peat and other articles of fuel. The directors are: J. Henev, J. J. Henev, A. A. St. Laurent, C. F. McCarney, and C. J. M. Charlebois, all of Ottawa.

The E. N. Henev Co., Limited, Montreal; capital, \$200,000; purpose, to manufacture and deal in harness and saddlery of all kinds. The directors are: C. R. Hosmer, H. S. Holt, F. W. Thompson, F. Paul, and R. D. McGibbon, all of Montreal.

Canada Cork Co., Limited, Toronto; capital, \$500,000; purpose, to take over the Canada Crown Cork and Seal Co., King street, Toronto. The directors are: G. T. Denison, N. B. Eagen, F. A. Fleming, C. O. Davis, and D. M. Best, all of Toronto.

The Ontario Crude Oil Co., Limited, Toronto; capital, \$300,000; purpose, to carry on in all its branches the opera-

tions of a mining, milling, reduction and development company. The directors are: J. W. Stokes, W. D. Earngey, and Jas. Kynock, all of Toronto.

The Orangeville Furniture Co., Limited, Orangeville, Ont.; capital, \$40,000; purpose, to manufacture and sell all kinds of furniture. The directors are: R. J. Disney, C. Hertel, R. Disney, and S. A. Hertel, all of Hanover, Ont.; and C. R. McKeown, Orangeville.

The Wm. Beatty Co., Limited, Parry Sound; capital, \$60,000; purpose, to carry on the business of general store keeping and to carry on a cartage and wharfage business. The directors are: I. E. Beatty, J. D. Beatty, and W. J. B. Beatty, all of Parry Sound.

The Canadian Hansa Cement Co., Limited, Montreal; capital, \$500,000; purpose, to manufacture and deal in cement. The directors are: H. Edmunds, London, England; R. L. Dillon, G. A. Dillon, W. P. Sharp, and R. C. McMichael, all of Montreal.

The Lakefield Canoe Building and Manufacturing Co., Limited, Lakefield, Ont.; capital, \$40,000; purpose, to manufacture and deal in canoes and boats of all kinds. The directors are: E. R. Tate, J. E. Richardson, G. A. Baptie, and H. G. Fitzgerald, all of Peterboro.

Fruit, Land, Brick and Supply Co., Limited, Hamilton; capital, \$40,000; purpose, to manufacture and deal in bricks, tile, building blocks and lumber. The directors are: F. Hamilton and J. Dickson, both of Hamilton; J. Tweddle, Saltfleet Township, Wentworth County.

The St. Catharines Wood and Lumber Co., Limited, St. Catharines; capital, \$40,000; purpose, to deal in and manufacture all kinds of wood and lumber. The directors are: W. H. McCordick, St. Catharines; E. O. Babcock, Niagara Falls, N. Y.; H. J. Nicholls, Huntsville, Ont.

The Woodruff-Robins Co., Limited, Toronto; capital, \$100,000; purpose, to carry on the business of constructing engineers and architects. The directors are: S. H. Woodruff, F. B. Robins, both of Buffalo; C. W. Wingard, John Payne, and Wm. Gilchrist, all of Toronto.

Connor-Ruddy Co., Limited, Toronto; capital, \$40,000; purpose, to carry on the business of outdoor display advertising, and advertising of all kinds. The directors are: G. J. Connor, E. L. Ruddy, H. J. Martin, and R. Southam, all of Toronto; and W. J. Southam, Hamilton.

Canadian United Milling Co., Limited, Montreal; capital, \$150,000; purpose, to carry on the flour and milling business

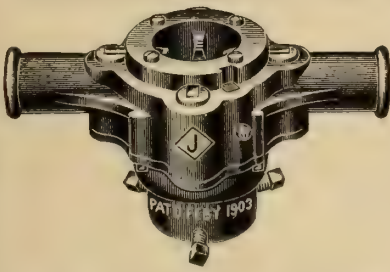
CHARLES BAYNES, England.
 MAKER OF THE **KNUZDEN BROOK, BLACKBURN,**
"CLICK-CLACK"
HACK SAW BLADES.
 In Factory Solely **NONE** In All sizes
 Devoted to Making **BETTER.** of Best
 Hack Saw Blades. English Steel.

The Hanover Portland Cement Co., Limited
HANOVER, ONTARIO.
 Manufacturers of **"Saugeen Brand"**
OF PORTLAND CEMENT.
 Prices on application.

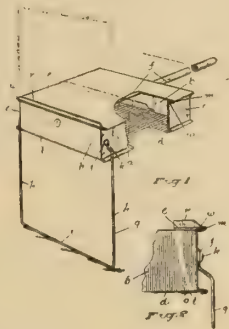
"THE EMLYN" SAW BENCH
 Made in 6 sizes. Best value obtainable. Specially
 designed for export With or without "Emlyn"
 Patent Guard. Sole maker—
CHARLES D. PHILLIPS,
 Cables— Emlyn Engineering Works
 "Machinery," Newport. NEWPORT, MON., ENGLAND

Will Hold Up a Shelf !
 That's what a shelf bracket is for.
 For this purpose there can be **NOTHING BET-**
TER, NOTHING CHEAPER than the **BRADLEY**
STEEL BRACKET. It is well Japanned, Strong
 and Light. The saving in freight is a good profit,
 aside from the lower price at which the goods are
 sold. Order direct or through your jobber.
ATLAS MFG. CO.,
 New Haven, Conn., U.S.A.

To
Manufacturers' Agents
 in the leading business centres here
 and abroad.
 Firms or individuals open for agencies
 in Canada or abroad may have their
 names and addresses placed on a special
 list kept for the information of inquirers
 in our various offices throughout Canada
 and in Great Britain without charge.
 Address
 Business Manager
HARDWARE AND METAL
 Montreal and Toronto


 It is a fact that one man with our **PATENT**
PIPE DIE can easily do the work of two
 men with any other. Send us your address
 and we will explain **HOW** and **WHY**.
A. B. JARDINE & CO.
 Mfrs. **TAPS** and **DIES**.
HESPELER, ONT.

PIG IRON **FOR**
IMPORT.
 Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.
Henry Rogers, Sons & Co., Montreal, P.Q.



You Will Make
Money This Fall
 if you have our
ALL METAL ASH SIFTER

Can be sold for 25c, and pay a good profit.
 Send for circular.

C. M. CUTTS & CO, Toronto Junction, Ont.
 Pat. in Canada, May 17, '04. U.S. Pat. allowed.



Pedlar's "Perfect" Metal Lath

CHEAP AS WOOD

Delivered to any railway station
 in Canada, for 10c. per square
 yard. Discount to dealers. Cir-
 culars and samples on request.

Pedlar People, Oshawa, Can.,
 or 767 Craig St., Montreal,
 Que.

WORK AND
PRICES
RIGHT
GALVANIZING
ONT.
WIND
ENGINE & PUMP CO.
TORONTO, ONT. LIMITED.

Order a stock of

"Windmill Best" Galvanized Sheets

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.
STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, - Montreal



COLE'S SPIRAL TUBULAR RADIATOR

Can be used
on any stove.

Best radiator made
—at half the cost
of inferior goods.

Only radiator
made adapted for
soft coal.

Size pipe collar,
5, 6 and 7 inches.

For Sale by

E.T. Wright & Co.
Hamilton, Cau.



METAL SKYLIGHTS and WINDOW FRAMES

Glazed with FIREPROOF GLASS.

CORRUGATED IRON and FIREPROOF DOORS ROOFINGS, CORNICES and CEILINGS

A. B. ORMSBY LIMITED,
MANUFACTURERS AND CONTRACTORS,
Cor. Queen and George Streets,
TORONTO, ONT.

in all its branches. The directors are :
H. J. Pidgeon, Grand Cascapedia, Que.;
C. Brandies, W. A. Weir, E. A.
Schmidt, all of Montreal; and John
Earle, Lachute, Quebec.

The Plummer-Ferguson Hardware Co.,
Limited, Sault Ste. Marie; capital, \$50,-
000; purpose, to establish and conduct
a general hardware store, both whole-
sale and retail. The directors are: W.
H. Plummer, C. V. Plummer, and J.
H. Luscombe, all of Sault Ste. Marie,
Ont.; R. G. Ferguson, and W. F. Fergu-
son, both of Sault Ste. Marie, Mich.

The A. D. Gall Petroleum and Chemi-
cal Co., Limited. Montreal; capital,
\$200,000; purpose, to extract produce
and deal in petroleum oil and other oils
generally. The directors are : A. D.
Gall, J. S. Clunie, Westmount; C. J.
Carow, L. Boyer, Montreal; and A. C.
Schneider, Hudson Heights, Quebec.

George S. Sinclair & Sons, Limited,
Warton; capital, \$40,000; purpose, to
acquire the business of Geo. S. Sinclair
& Sons, manufacturers of and workers
in machinery, tools, boilers, and gen-
eral iron foundries. The directors are :
G. S. Sinclair, D. S. Sinclair; both of
Warton; and W. C. Wilson, Toronto.

The Canadian Timber Co., Limited,
Ottawa; capital, \$250,000; purpose, to
carry on throughout Ontario the busi-
ness of lumbermen, timber merchants,
etc. The directors are : W. B. Mc-
Allister, Ottawa; J. W. Bryson, J. W.
Hennessy, both of Fort Coulonge, Que.;
Wm. Anderson, Ottawa; and J. A. Cam-
eron, Dominionville, Que.

The Mineral City Fire Clay Co., Lim-
ited, Moose Jaw, N. W. T.; capital,
\$78,000; purpose, to manufacture and
sell fire brick, building brick, and other
clay products. The directors are : H.
New, Hamilton; B. B. Carter, W.
White, W. E. Seaborne, and O. White,
all of Moose Jaw.

— — —
LICENSES GRANTED.

The Canadian Northern Express Co.,
incorporated under the Dominion Gov-
ernment, to carry on their business in
Ontario.

The Canadian Northern Telegraph Co.,
incorporated under the Dominion Gov-
ernment, to carry on their business in
Ontario.

The Canadian Northern Transfer Co.,
Limited, incorporated under the Do-
minion Government, to carry on their
business in Ontario.

Standard Technical Works

Books Written for the
Metal Merchant or
the Metal Worker.

A Manual of Mechanical Drawing.

By Philip D. Johnston; 65 full-page
plates and 2 folding plates, with full text
and 134 illustrations; cloth.....\$2.00

Domestic Electrical Work.

By W. A. Wittbecker. How to wire build-
ings for bells, alarms, annunciators, and
gas lighting from batteries. 55 pages,
illustrated; paper, 25c.; cloth..... 50c.

Ladd's Discount Book.

By W. J. Ladd, showing net of any sum
at all discounts; cloth, \$3.00; double
indexed.....\$4.00

Blue Print Making.

A pamphlet. Directions for Constructing
and Printing Frame, Preparing the Paper
and Making Prints of Various Kinds.
23 pages 25c.

Architects' Handbook on Cements.

By Addison H. Clarke. Specifications for
mixing and using cements. 96 pages....\$1.00

Metallurgy of Cast Iron.

By Thos. D. West. Showing processes
involved in its treatment, chemically and
physically, from the blast furnace,
through the foundry, to the testing
machine. 627 pages, 153 illustrations....\$3.00

Galvanizing and Tinning.

By W. T. Flanders. Coating with tin and
zinc; also tinning gray iron castings....\$2.00

Practical Plating and Polishing.

Best and Most Approved Methods of
Preparing and Cleaning all Metals for
Electro-Plating and Polishing. 114 pages,
illustrated 80c.

New Metal Worker Pattern Book.

By Geo. W. Kittredge. Pattern cutting as
applied to all branches of sheet metal
work, 430 pages, 744 illustrations.....\$5.00

Tinners' Helper and Pattern Book.

By H. K. Vosburgh. Rules, diagrams,
tables, 123 pages, 53 figures\$1.00

Roofing, Cornice and Skylight Manual.

Laying flat and standing seam roofing,
cornice shop practice and skylight con-
struction, 175 pages, 170 illustrations and
13 plates\$1.50

Furnace Heating.

By Wm. G. Snow. Comprehensive treatise
on warming buildings with hot air, with
appendix on furnace fittings, 170 pages,
90 illustrations, cloth.....\$1.50

Plumbing Problems.

House drainage and plumbing, 309 pages,
146 illustrations.....\$2.00

Practical Hints on Joint Wiping.

For beginners in plumbing, 66 pages..... 25c.

Kitchen Boiler Connections.

A selection of practical letters and arti-
cles relating to water backs and range
boilers. Fifth edition, enlarged\$1.00

Enquiries for above books should be
sent to The Editor

HARDWARE AND METAL,
Montreal Toronto

... FULL STOCK ...

Salt Glazed Vitrified



Double Strength Culvert Pipe
a Specialty.

THE CANADIAN SEWER PIPE CO.

HAMILTON, ONT. TORONTO, ONT.
ST. JOHNS, QUE.

THE ADAMS STOVE PIPE REGISTER.



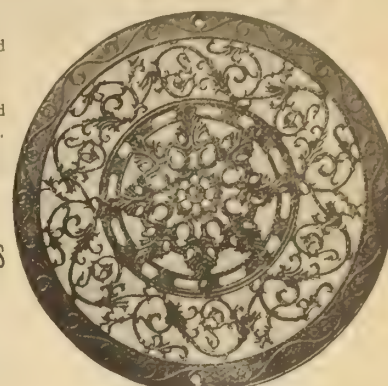
Design Patented
June 29, 1897.

Design Patented
August 31, 1897.

Made by

The Adams
Company

Dubuque,
Iowa, U.S.A.





The Finishing Touch

in the construction of any building is the roof. Without a durable attractive roof the entire appearance and service of the building is unsatisfactory. Galvanized iron, tin, tar and shingles are being discarded on account of their unsatisfactory results, and

REX FLINTKOTE ROOFING


is fast becoming the universal roofing. It costs less laid than shingles, will outwear several galvanized iron roofs, is absolutely waterproof, and many buildings have been saved by its fire-resisting qualities. Our book on roofing, which we will send with free samples, is yours for the asking.

J. A. & W. BIRD & CO., 49 India Street, Boston, Mass.



"LOOK FOR THE BOY" ON EVERY ROLL

100 CANDLE POWER



1/2 PER HOUR

AUER GASOLENE LAMP

Gives more light than

10 COAL OIL LAMPS, 6 ELECTRIC OR 5 ACETYLENE LIGHTS, AT A LOWER COST THAN COAL OIL.

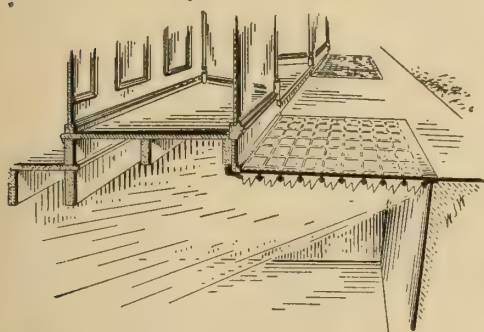
Each lamp makes and burns its own gas. No wick, no dirt, no grease, no smoke, no odor.

Catalog and discounts on request.

AUER LIGHT CO., 1691 Notre Dame Street, **MONTREAL**

STORE ALTERATIONS

Now is the time—do not leave until winter months. Send for information and



BEST METHOD
of LIGHTING
STORES,
BASEMENTS,
CELLARS.

LUXFER PRISM CO., Limited,
100 King St. West,
TORONTO.



The Saw That Sells Itself.

When placed in the hands of the intelligent mechanic the **ATKINS** High Grade Silver Steel Hand Saw sells itself. You simply show it and the saw does the rest.

ATKINS Silver Steel Hand Saws with Perfection Handles are warranted the **FINEST** Saws on earth in material, temper, grinding and finish.

Write for Catalogue and Prices.

E. C. ATKINS & CO.

C. D. TEN EYCK, Sales Agent for Canada.
Toronto Office: 30 Front St. East. Tel. Main 1896.



ATKINS
ALWAYS AHEAD

Leading Saw and Tool Manufacturers
Factories: **INDIANAPOLIS, IND.**
Northwestern Branch: **Minneapolis, Minn.**

ALEX. McARTHUR & CO., Limited, 82 McGill St., Montreal

YOU CAN DEPEND ON OUR

Ready Roofing, Sheathing and Black  Diamond Tarred Felts

These and our

Building Papers, Fibre and Manilla Wrappings, etc.,

are made at our own Mills and Factory

FELT FACTORY

Harbour and Logan Sts., MONTREAL

PAPER MILLS

JOLLIETTE, QUE.

CURRENT MARKET QUOTATIONS.

July 29, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

METALS.

TIN.

Lamb and Flag and Straits—
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

TIN PLATES.

Charcoal Plates—Bright. Per box.
M.L.S., equal to Bradley— \$6 50
I.C. usual sizes. 8 00
I.X. " 9 50
Famous, equal to Bradley—
I.C. 6 75
I.X. " 8 25
I.X.X. " 9 75

Raven and Vulture Grades—
I.C. usual sizes. 4 25
I.X. " 5 00
I.X.X. " 5 75
I.X.X.X. " 6 50

"Dominion Crown Best"—Double
Coated, Tissue. Per box.
I.C. 5 50
I.X. 6 50
I.X.X. 7 50

Allaway's Best—Standard Quality.
I.C. 4 50
I.X. 5 50
I.X.X. 6 50

Coke Plates—Bright.
I.C. usual size, 14x20 3 35
I.C. special sizes, base 3 60
20x28 7 10

Dean or J. G. Grade—
I.C. 20x28, 112 sheets 7 50
I.X. Terne Tin 10 50

Charcoal Tin Boiler Plates.
Cockley Grade—
X.X. 14x56, 50 sheet bxs. }
14x60, } 7 00
14x65, }

Tinned Sheets.
72x30 up to 24 gauge. 7 25 7 50
26 7 75 8 00

IRON AND STEEL.
Common bar, per 100 lb. 1 80
Refined 2 20
Horseshoe Iron 2 25

Hoop steel, 1 1/2 to 3-in. base 2 75
Sleigh shoe steel, 2 10
Tire steel 2 30 2 50

T. Firth & Co.'s tool steel, per lb. 0 12 1/2 0 13
B. K. Morton & Co.—
"Alpha" tool steel. 0 70
"M" Self-Hardening. 0 60
"J" Standard. 0 14
"J" High speed steel. 0 60
"standard tool steel. 0 14
"crucible sheet steel. 0 14
Chas. Leonard's tool. 0 08 0 09

Crucible Steel Co.
"Black Diamond. 0 10 0 11
"Silver steel. 0 13
"Special. 0 17
"Rex high speed steel. 0 65 0 75
"Self-Hardening. 0 45 0 50
Sanderson's Crucible Tool. 0 09 0 09
"Superior. 0 12 0 13
"Extra And. 0 15 0 15
"Self-Hardening. 0 45 0 50
"Rex high speed. 0 65 0 75
Jonas & Colver's tool steel. 0 10 0 20
"Air Hardening. 0 70
Drill steel, per lb. 0 08 0 10

BABBIT METAL.

"Tandem," A per lb. 0 27
" B 0 21
" C 0 11 1/2
Frictionless Metal 0 23

Syracuse Smelting Works:

Aluminum, genuine 0 45
Government, " 0 44
Tough, " 0 40
Hard, " 0 40
Dynamo 0 30
Special 0 25
Harmony 0 22
Car Box 0 20
Extra 0 15

The Canada Metal Co.:

Imperial, genuine, 0 40
Metallic 0 30
Hercules 0 20
Star 0 15
No. 1 0 12
No. 2 0 10
No. 3 0 06
No. 4 0 05

Geo. Langwell & Son.

No. 1 0 08
No. 2 0 07
No. 3 0 05 1/2
Extra 0 09 1/2

BLACK SHEETS.

10 and 16 gauge. Montreal Toronto
18 gauge. 2 25 2 50
20 gauge. 2 30 2 50
22 to 24 gauge. 2 35 2 70
26 " 2 40 2 80
28 " 2 40 2 90

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary. Dom. Crown.
All bright. 2 60
Galvanized Canada Plates— 3 50

18x24x52 4 25 4 35
" 60 4 50 4 60
20x28x80 8 50 8 70
" 94 9 00 9 20

GALVANIZED SHEETS. Queen's
Fleur-de-Lis. Gordon Crown. Comet Bell. Head
16 gauge. 3 65
18 to 24 gauge. 3 75 3 75 3 75 3 75
26 " 4 00 4 00 3 90 4 00
28 " 4 25 4 25 4 05 4 25

American brands, \$4.00 for 28 gauge.
Less than case lots 10 to 15c. extra.

CHAIN.

Proof coil, 3-16 in., per 100 lb. 7 00 10 00
" 1/2 " " " 5 60
" 3/4 " " " 4 45
" 1 " " " 3 85
" 1 1/4 " " " 3 70
" 1 1/2 " " " 3 55
" 1 3/4 " " " 3 45
" 2 " " " 3 35
" 2 1/2 " " " 3 25

Halter, kennel and post chains, 40 to 40 and
5 per cent. 40 p.c.
Cow ties 65 p.c.
Tie out chains 35 p.c.
Stall fixtures 45 p.c.
Trace chain 35 p.c.
Jack chain, iron, single and double, discount
count 40 p.c.

COPPER.

Ingot. Per 100 lb.
Casting, car lots 13 75
Bars.

Cut lengths, round, 1/2 to 1 in. 21 00 23 00
" round and square,
1 to 2 inches. 21 00 23 00

Sheet.
Plain, 16 oz., 14x48 and 14x60 20 00
Plain, 14 oz. 21 00
Tinned copper sheet 24 00
Planished 32 00

Braziers' (in sheets).
4x6 ft., 25 to 30 lb. each, per lb. 0 22
" 35 to 45 " 0 21
" 50-lb. and above " 0 20

BOILER AND T.K. PITTS.

Plain tinned, per lb. 0 28
Spun, per lb. 0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.
Sheets, hard-rolled, 2x4 0 23
Tubing, base, per lb. 0 23 1/2

ZINC SPelter.

Foreign, per 100 lb. 6 00 6 25
Domestic " 6 00 6 25

ZINC SHEET.

5-cwt. casks 6 15 6 50
Part casks. 6 50 7 00

LEAD.

Imported Pig, per 100 lb. 3 20 3 30
Bar, per lb. 0 05
Sheets, 2 1/2 lb. sq. ft., by roll 0 06 1/2
Sheets, 3 to 6 lb. 0 06

NOTE.—Cut sheets 1/2 c. per lb., extra. Pipe,
by the roll, usual weights per yard, lists at 7c.
per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe
8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00
per 100 lb.; buck, seal and ball, \$7.50. Dis-
count, 17 1/2 p.c. Prices are f.o.b. Toronto,
Hamilton, Montreal, St. John and Halifax.
Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.
Zinc 6 00
Copper, discount 20 per cent. off revised list.

BATHS.

Standard Enamelled.
5 1/2-ft. rolled rim, 1st quality 21 60
" 2nd 16 35

CLOSETS.

Fittings 1 00
Plain Simplex Syphon Jet 9 00
Emb. 9 50
Fittings 1 25
Low Down Elgin or Teutonic, plain 6 00
Low " emb. 6 50
Connection 1 25
Plain Richelieu 4 25
Emb. 4 50
Connections 1 25
Basins, P.O., 14-in. 0 63
Basins, oval, 17 x 14-in. 1 50
Basins, " 19 x 15-in. 2 00

IRON PIPE.

Black pipe—
1/2 inch Per 100 feet. 1 95
" 3/4 " 2 05
" 1 " 2 15 2 25
" 1 1/4 " 2 35
" 1 1/2 " 2 95
" 1 3/4 " 4 25
" 2 " 5 95 6 10
" 2 1/2 " 7 15 7 40
" 3 " 10 00
" 3 1/2 " 18 00
" 4 " 21 00
" 4 1/2 " 26 75 27 00
" 5 " 39 00
" 5 1/2 " 38 00
" 6 " 40 00
" 6 1/2 " 53 00

Galvanized pipe—
1/2 inch 2 88
" 3/4 " 3 11
" 1 " 3 42
" 1 1/4 " 4 40
" 1 1/2 " 6 35
" 1 3/4 " 8 80
" 2 " 10 75
" 2 1/2 " 14 80

Malleable Fittings—Discount 20 p.c.
Cast Iron Fittings—
Standard, 5 1/2 per cent.; unions, 55 per cent.;
on nipples, headers and flanged unions, 60
per cent.

PLUMBERS' BRASS GOODS.

Standard Compression work, dia. 60 & 10 p.c.
Cushion work, discount 50 per cent.
Fuller work, discount 70 per cent.
6 dozen lots and over of the above, extra dis-
count 10 per cent.

Lever handle Stops and Waste, discount 60
per cent. With in lots of 2 dozen and over
an extra discount of 10 per cent.

J.M.T. Globe, Angle and Check Valves, dis-
count 55 per cent.

Standard Globe, Angle and Check Valves,
discount 65 per cent.

Kerr's special standard globes and angles,
discount 60 per cent.

Kerr's Jenkin disc, copper-alloy disc and
heavy standard valves, discount 60 per cent.
Kerr's standard brass checks, discount 60 p.c.
Kerr's standard brass disc steam radiator
valves, discount 70 per cent.

Kerr's Jenkin disc, copper-alloy disc radi-
ator valves, discount 70 per cent.

Kerr's quick-opening hot-water radiator
valves, discount 70 and 10 per cent.

Weber's (Kerr) patent straightway gate
valves, brass, discount 55 per cent.

Weber's (Kerr) patent straightway gate
valves, I.B.B.M., discount 70 per cent.

J.M.T. Radiator Valves discount 55 per cent.
Standard Radiator Valves, discount 65 per
cent.

Patent Quick-Opening Valves, discount 65
per cent.

No. 1 compression bath cock net 1 75
No. 4 " " " " 1 90
No. 7 Fuller's " " " " 2 10
No. 4 1/2 " " " " 2 25

Patent Compression Cushion, basin
cock, hot and cold per doz. 15 00
Patent Compression Cushion, bath
cock, No. 2208 2 25
Square head brass cocks, discount 55 per cent.
" iron " 50 to 60 " 25.00

RANGE BOILERS.

Copper, 30 gallon 22 00
" 35 " " " 24 00
" 40 " " " 28 00

Discount off copper boilers 15 per cent.

SOLD PIPE AND FITTINGS.

Light soil pipe, discount, 50 per cent.
" fittings, discount 50 and 10 p.c.
Med. and Extra heavy pipe and fittings, dis. 60
per cent.
and 8-in. pipe, discount 40 and 5 per cent.

SOLDER.

Bar, half-and-half, guaranteed Per lb. 0 18
Bar, half-and-half, commercial 0 17

WRENCHES.

Acme, discount 35 to 37 1/2 per cent.
Agricultural, discount 60 per cent.
Coe's Genuine, discount 20 to 25 per cent.
Towers' Engineer each 2 00 7 00
" S per doz. 5 80 6 00
G. & K.'s Pipe 3 40
Burrell's Pipe each 3 00
Pocket per doz. 0 25 2 90

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 08
French "	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt.	Less than this quantity 4c. extra.
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
" umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	5 50
Chrome greens	0 09
French green	0 18
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb.	0 09
Whiting, bbl.	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	5 00
Monarch	4 75
Decorator's Pure	4 25
Essex Genuine	5 00
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs,	4 75	
No. 1, 560 lb. casks, per cwt	4 00	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark" B'd	1 25
"British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 10
Bladders in kegs, boxes or loose	1 85
25-lb. tins	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots. Per gal. Net.

Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 10	1 25
Furniture, extra	0 90	1 00
No. 1	1 35	1 50
Hard oil finish	1 60	1 70
Light oil finish	1 75	2 00
Damar	2 40	2 50
Shellac, white	2 30	2 40
"orange	1 10	1 20
Turpentine, brown japan	1 10	1 20
"black japan	0 85	0 90
No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	2 75
Granitine floor finish, per gal.	2 00	2 75
Maple Leaf coach enamels; size 1, \$1.20; size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish, assorted case, from	to 1 gal., \$2.50.	

GLUE.

Common	0 08	0 08½
French medal	0 10	0 14
White, extra	0 18	0 22
Gelatine	0 18	0 20
Strip	0 18	0 20
Coopers	0 19	0 20
Huttner	0 12	0 16
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 20 per cent. to list. B. B. Caps, discount 40 per cent. American.	
Central Fire Pistol and Rifle, 5 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads, per lb.

Best thick brown or grey felt wads, in ½-lb. bags	80	70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99	
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35	
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20	
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25	
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.	
11 and smaller gauge	0 60	
9 and 10 gauges	0 70	
7 and 8 "	0 90	
5 and 6 "	1 10	
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—		
11 and smaller gauge	1 15	
9 and 10 gauges	1 40	
7 and 8 "	1 65	
5 and 6 "	1 90	

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

AXES.

Chopping Axes	
Single bit, per doz.	7 00 10 00
Double bit	10 00 18 00
Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters' Axes	5 50 6 00
Boys' Axes	6 25 7 00
Splitting Axes	7 00 12 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.

Red Ridge, boys', handled	5 75
hunters'	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE.

Ordinary, per gross	6 00 7 00
Best quality	10 00 12 00

BELLS.

Hand.

Brass, 60 per cent.	
Nickel, 55 per cent.	

Cow.

American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

Door.

Gongs, Sargent's	5 50 8 00
"Peterboro", discount 50 and 10 per cent. off new list.	

Farm.

American, each	1 25 3 00
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House.

American, per lb.	0 35 0 40
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BELLOWS.

Hand, per doz.	3 35 4 75
Moulders, per doz.	7 50 10 00
Blacksmiths', discount 49 per cent.	

BELTING.

Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	
Agricultural, not wider than 4 in., 75 per cent.	

BITS.

Auger.

Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.

Gilmour's, 47½ per cent.	
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Expansive.

Clark's, 40 per cent.	
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Gimlet.

Clark's, per doz.	0 65 0 90
Diamond, Shell, per doz.	1 00 1 50
Nail and Spike, per gross	2 25 5 20

BLIND AND RED STAPLES.

All sizes, per lb.	0 07½ 0 12
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BOLTS AND NUTS.

Carriage Bolts, common (\$1 list)	
" 3-16 and ½"	60 and 10
" 5-16 and ½"	55 and 5
" 7-16 and up	55 and 5
" full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60
Machine Bolts, all sizes, ½ and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5
Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4c. per lb. off.	
Stove Rods per lb., 5½ to 6c.	

ROOT CALKS.

Small and medium, ball	per M. 4 25
Small heel	" 4 50

BRIGHT WIRE GOODS.

Discount 62½ per cent.	
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BUTCHERS' CLEAVERS.

German	per doz. 6 00 9 00
American	" 12 00 18 00

BUTCHER KNIVES.

Bailey's	per doz. 0 60 6 30
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BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 50
Dry Fibre	" 400 " 0 55
Tarred Fibre	" 400 " 0 65
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 400 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Roof " small packages	0 25
Refined Tar	per barrel 5 00
Coal Tar	" 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 00

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.9	or 2-inch
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BUTTS.

Wrought Brass, net revised list.	
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Cast Iron.

Loose Pin, discount 60 per cent.	
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Wrought Steel.

Fast Joint, discount 65, 10 and 2½ per cent.	
Loose Pin, discount 65, 10 and 2½ per cent.	
Berlin Bronzed, discount 70, 70 and 5 per cent.	
Gen. Bronzed	per pair 0 40 0 65

CARPET STRETCHERS.

American	per doz. 1 00 1 50
Bullard's	" 6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross 7 50 8 50
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CHALK.

Carpenters' Colored, per gross	0 45 0 75
White lump	per cwt. 0 60 0 85
Red	" 0 05 0 06
Crayon	per gross 0 14 0 18

CHISELS.

Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS-STOCK.

Colonial Stock Foods, 50c. packages,	per doz \$4 00
" " " 25c. pkgs., "	" 2 00
" " " 10c. " "	" 75
" " " 25-lb. pail, each	1 80
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz.	1 25
Worm	" 1 25

International 1 Stock Foods, \$1 packages,	per doz. 8 00
International Stock Foods, per pail	2 75
" " " per bbl.	10 50
" Poultry " \$1 pkgs. per doz.	8 00
" Worm Powders, 50c. pkgs.	4 00
" Pine Healing Oil, per doz.	8 00
" Pheno-Chloro, 50c. pkgs. per doz.	8 00
" Hoof Ointment	8 00
" Compound Absorbent	16 00
Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.	

CLIPS.

Axle, discount 65 per cent.	
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EASY TO PUT ON HARD TO WEAR OUT

Aptly describes two of the many advantages possessed by Paterson's Wire Edged Ready Roofing, the only popular substitute for Shingles.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.
American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.
Plain or Corrugated.

2-inch	per 100 feet	3 00
3 "	" "	4 00
4 "	" "	5 25
5 "	" "	6 75
6 "	" "	9 00

CRADLES, GRAIN.
Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	per pair	0 17½
S. & D., " 5	" "	0 22½
S. & D., " 6	" "	0 15
Boynnton pattern	" "	0 20

DOOR SPRINGS.

Torrey's Rod	per doz.	1 75
Coll. 9 to 11 in.	" "	0 95
English	" "	2 00

DRAW KNIVES.

Co. and Wagon, discount 50 per cent.
Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Millar's Falls, per doz., net list.

DRILL BITS.

Morse, discount 37½ to 40 per cent.
Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAVETROUGHES.

10-inch per 100 ft. 10 00

ELBOWS (stovepipe.)

5 and 6-inch, common	per doz.	1 20
Polished, 15c. per dozen extra.	" "	1 35

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western	70 and 10	per cent.
Arcade	70	" "
Kearney & Foot	70	" "
Dianston	70	" "
American	70	" "
J. Barton Smith	70	" "
McClellan	70	" "
Eagle	70	" "
Nicholson, 60 and 10 to 60, 10 and 5	" "	" "
Royal	80	" "
Globe	70 to 75	" "
Black Diamond, 60 and 10 to 60, 10 and 5 per cent.	" "	" "
Jowitt's, English list, 25 to 27½ per cent.	" "	" "
Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50	" "	" "

GLASS.

Window. Box Price.

Size United Inches.	Per 50 ft.	Star 100 ft.	D. Diamond Per 50 ft.	Per 100 ft.
Under 26	3 80		5 06	
26 to 40	4 00		5 44	
41 to 50	4 50		6 56	
51 to 60	4 75		7 50	
61 to 70	5 00		8 62	
71 to 80	5 30		9 38	
81 to 85			10 75	
86 to 90			12 30	
91 to 95			15 00	
96 to 100			18 00	
Discount 15 per cent.				

GAUGES.
Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33 each 1 65 2 40

GILLET'S POWDERED LYE.

1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.

HALTERS.

Rope, ¾-inch	per gross	12 00
Rope, 1-inch	" "	9 00
Rope, 1 to 1½-inch	" "	14 00
Leather, 1-inch	per doz.	4 00
Web, 1½	" "	5 20
Web, 2	" "	2 45

HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian

discount 25 to 27½ per cent.

Tack.

Magnetic per doz. 1 10 1 20

Sledge.

Canadian per lb. 0 07½ 0 08½

Ball Peen.

English and Canadian, per lb. 0 22 0 25

HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00

Sore door per doz. 1 00 1 50

Fork.

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

American per doz. 1 00 1 25

Plane.

American per gross 3 15 3 75

Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

doz. pairs.

Steel barn door 8 00 10 00

Stearns, 4-inch 4 50

" 5-inch 6 00

Zenith 9 00

Lane's covered—

No. 11, 5-foot run 8 40

No. 11½, 10-foot run 10 80

No. 12, 10-foot run 12 60

No. 14, 15-foot run 21 00

Steel, covered 4 00 11 00

" track, 1 x 3-16 in (100 ft) 3 75

" 1½ x 3-16 in (100 ft) 4 75

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.

Shingle, Red Ridge 1, per doz. 4 40

" 2, per doz. 4 85

Barrel, Underhill 5 00

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½

" 5-in., " 0 06½

" 6-in., " 0 06½

" 8-in., " 0 05½

" 10-in., " 0 05½

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in. per 100 lb. 4 50

12 in. up. 3 25

Spring, No. 20, per gro. pairs 10 50

HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter per doz. 4 00 4 50

HOLLOW WARE.

Tinned cast, 35 per cent.

HUQUE.

Cast Iron.

Bird cage per doz. 0 80 1 10

Clothes line, No. 61 0 00 0 70
Harness 0 60 12 00
Hat and coat per gro. 1 10 10 00
Chandelier per doz. 0 50 1 00

Wrought Iron.
Wrought hooks and staples Canadian discount 60 per cent.

Wire.
Hat and coat, discount 60 per cent.
Belt per 1,000 0 60
Screw, bright, discount 60 per cent.

HORSE NAILS.
"C" brand, 40, 10 and 7½ per cent. off list
"M" brand, 55, per cent.
Countersunk, 57½ per cent.
"Monarch," 50 and 7½ per cent.
"Peerless" 50 per cent. dis.

HORSESHOES.
F.O.B. Montreal
No. 2 No. 1
and and
larger smaller.

Iron Shoes.
Light, medium and heavy 3 65 3 90
Snow shoes 3 90 4 15

Steel Shoes.
XL, sizes 1 to 5 5 35
Light, No. 2 and larger 3 80
No. 1 and smaller 4 05
Featherweight, all sizes 0 to 4 5 35
Toe weight, all sizes 1 to 4 6 60

JAPANNED WARE.
Discount 50 per cent.

ICE PICKS.
Star per doz. 00 3 25

KETTLES.
Brass spun 7½ per cent. discount off new list.
Copper per lb. 0 30 0 50
American, 60 and 10 to 65 and 5 per cent.

KEYS.
Lock, Canadian dis. 40 to 40 and 10 per cent.
Cabinet, trunk and padlock,
American per gross 0 60

KNOBES.
Door, japanned and N.P., per doz. 1 50 2 50
Bronze, Berlin per doz. 2 75 3 25
Bronze, Genuine 6 00 9 00
Shutter, porcelain, F. & L. screw per gross 1 30 00
White door knobs per doz. 2 00

HAY KNIVES.
Net prices.

LAMP WICKS.
Discount, 60 per cent.

LANTERNS.
Cold Blast per doz. 7 00
No. 3, "Wright's" 8 50
Ordinary, with O burner 4 00
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No. 0 5 75
Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.
Porcelain lined per doz. 2 20 5 60
Galvanized 1 87 3 85
King, wood 2 75 2 90
King, glass 4 00 4 50
All glass 0 50 0 90

LINES.
Fish per gross 1 05 2 50
Chalk 1 90 7 40

LAWN MOWERS.
Woodyatt, 10½-in. wheel, 14-in. cut 8 50
Star, 9-in. " " (net) 7 00
Daisy, 8-in. " " 2 87½
Philadelphia, 7½-in. " " 7 00
Ontario, 7½-in. " " 15 80
King Edw'd, 12-in. " " 9 50

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:
10½-in. high wheel 7 50 10 00
9-in. " " 5 50 6 25
8-in. " " 4 90 5 50

Discount 50 per cent.

LOCKS.
Canadian, 50 to 50 and 10 per cent.
Russell & Erwin per doz.

Cabinet.
Eagle, discount 30 per cent.

Padlocks.
English and Am. per doz. 0 50 6 00
Eagle, discount 20 to 25 per cent.

MACHINE SCREWS.
Iron and Brass.
Flat head, discount 25 per cent.
Round head, discount 20 per cent.

MALLETS.
Tinsmiths' per doz. 1 25 1 50
Carpenters', hickory, " 1 25 3 75
Lignum Vitae 3 85 5 00
Caulking, each 0 60 2 00

MATTOCKS.
Canadian per doz. 5 50 6 00

MEAT CUTTERS.
American, discount 3½ per cent.
German, 15 per cen each 1 15

MILK CAN TRIMMINGS.
Discount 25 per cent.

NAILS. Cut. Wire.
2d and 3d 3 30 3 45
3d 2 95 3 12
4 and 5d 2 70 2 95
6 and 7d 2 60 2 80
8 and 9d 2 45 2 60
10 and 12d 2 40 2 55
16 and 20d 2 35 2 50
30, 40, 50 and 60d (base) 2 30 2 45

Wire nails in carlots are \$2.40.
Steel cut nails 10c. extra.
Miscellaneous wire nails, discount 15 per cent.
Coopers' nails, discount 30 per cent.

NAIL PULLERS.
German and American 1 75 2 50

NAIL SETS.
Square, round and octagon, per gross 3 38
Diamond 1 00

POULTRY NETTING.
2-in. Mesh, 19" w.g., dis. 60 per cent.
2-in. Mesh, 16 w.g. and heavier, 50 p.o.

OAKUM.
U. S. Navy per 100 lb. 6 75
Plumbers 3 00

OILERS.
McClary's Model galvanized oil can, with bump, 5 gallon, per dozen 10 00
Davidson oilers, discount 40 per cent.
Zinc and tin, discount 50, 50 and 10 per cent.
Copper per doz. 1 25 3 50
Brass 1 50 3 50
Malleable, discount 25 per cent

GALVANIZED PAIRS.
Dufferin pattern pairs, discount 45 per cent
Flaring pattern, discount 45 per cent.
Galvanized washtubs, discount 45 per cent

PIECED WARE.
Discount 40 per cent off list, June, 1899.
10-qt. flaring sap buckets, discount 40 per cent
6, 10 and 14-qt. flaring pails dis. 40 per cent.
Creamer cans, discount 40 per cent.

PICKS. 6 00 9 00

PICTURE NAILS.
Porcelain head per gross 1 35 1 50
Brass head 0 40 1 00

PICTURE WIRE.
Tin and gilt, discount 75 per cent.

PINE TAR.
½ pint in tins per gross 7 80
1 " " 9 60

PLANES.
Wood bench, Canadian discount 40 per cent., American discount 50 per cent.
Wood, fancy Canadian or America 37½ to 40 per cent

Remington Raises Records

The new C.E.O. Trap Gun established the five-man squad world's records—1454-1500 clay targets, 97 per cent., in three consecutive days.

Do you care for record-breaking scores? The new Remington C.E.O. gun, listing at \$95.00, is a revelation to those who have been used to old-style guns.

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Depot: 86-88 First St., San Francisco, Cal.

PLANE IRONS.		SAP SPOUTS.		STAPLES.		ENAMELLED WARE.	
English	per doz. 2 00 5 00	Bronzed iron with hooks	per 1,000 7 50	Galvanized	3 00	White, Princess, Turquoise, Blue and White	
PLIERS AND NIPPERS.		"Eureka" tinned steel, hooks	8 00	Plain	2 80	discount 50 per cent.	
Button's genuine, per doz. pairs, discount		SAWS.		Coopers', discount 45 per cent.		Diamond, Famous, Premier, discount 50 and	
37 1/2 to 40 per cent.		Hand, Diaston's, discount 12 1/2 per cent		Poultry netting staples, discount 40 per cent.		10 per cent.	
Button's imitation, per doz.	5 00 9 00	S. & D., discount 40 per cent.		STOCKS AND DIEN.		Granite or Pearl, Imperial, Crescent, discount	
German	0 60 60	Crosscut, Diaston's, per foot 0 35 0 55		American discount 25 per cent.		50, 10 and 10 per cent.	
PRESSED SPIKES.		S. & D., discount 35 per cent. on Nos. 2 and 3.		STONE.		Premier steel ware, 40 per cent.	
Discount 20 per cent.		Hack, complete, each 0 75 2 75		Washita	0 28 0 60	"Star" decorated steel and decorated white,	
PULLEYS.		" frame only, each 0 50 1 25		Hindustan	0 06 0 07	25 per cent.	
Hothouse	per doz. 0 55 1 00	SASH WEIGHTS.		Turkey	0 09 0 13		
Axle	0 22 0 33	Sectional, per 100 lb.	2 00 2 25	Labrador	0 15		
Screw	0 27 1 00	Solid	1 50 1 75	Turkey Axle	0 50		
Awning	0 35 2 50	SASH CORD.		Arkansas	1 50		
PUMPS.		Per lb.	0 28 0 30	Water-of-Ayr	0 10		
Canadian cistern	1 80 3 60	SAW SETS.		Scythe	3 50 5 00		
Canadian pitcher spout	1 40 2 10	Lincoln and Whiting	4 75	Grind, 2-in., 40 to 200 lb., per ton	25 00		
PUNCHES.		Hand Sets, Perfect	4 00	" under 40 lb.,	28 00		
Saddler's	per doz. 1 00 1 85	X-Cut Sets,	7 50	" under 2 in. thick,	29 00		
Conductor's	3 00 15 00	SCALES.		STOVEPIPES.			
Flippers, solid, per set	0 72	Gurney Standard, 40 per cent.		5 and 6 inch, per 100 lengths	7 00		
" hollow, per inch	1 00	Gurney Champion, 50 per cent.		7 inch	7 50		
RAKES.		Burrow, Stewart & Milne—		ENAMELINE STOVE POLISH.			
Wood	per doz. net 1 20 up	Imperial Standard, discount 40 per cent.		No. 4, 3 doz. in case, net cash	4 80		
RAZORS.		Weight Beams, discount 35 per cent.		No. 6, 3 doz. in case,	8 40		
Elliot's	4 00 18 00	Champion Scales, discount 50 per cent.		TACKS, BRADS, ETC.			
Geo. Butler's & Co.'s	4 00 18 00	Fairbanks standard, discount 35 per cent.		Carpet tacks, blue,	80 and 15		
Boker's	7 50 11 00	" Dominion, discount 55 per cent.		" " " (in kegs)	80 and 20		
" King Cutter	12 50 15 00	" Richelieu, discount 55 per cent.		Cut tacks, blue, in dozens only	40		
Wade & Butcher's	3 50 10 00	Warren's new Standard, discount 40 per cent.		" 1/2 weights	60		
Thelle & Quack's	7 00 12 00	" Champion, discount 50 per cent.		Swedes cut tacks, blue and tinned—	80 and 10		
Carbo Magnetic	15 00	" Weightbeams, discount 35 per cent.		In bulk	75		
Griffon Barber's Favorite	10 75	SCREW DRIVERS.		In dozens	75		
Griffon No. 65	13 00	Sargent's	per doz. 0 65 1 00	Swedes, upholsterers', bulk,	85, 12 1/2 and 12 1/2		
Griffon Safety Razors	13 50	SCREEN DOORS.		bulk	70		
Griffon Strapping Machines	13 50	Common doors, 2 or 3 panel, walnut		Swedes, gimp, blue, tinned and	75 and 12 1/2		
Lewis Bros "Klean Cutter"	8 50 10 50	stained, 4-in. style, per doz.	6 50	japanned	75 and 12 1/2		
Clauss, 50 and 10 per cent.		Common doors, 2 or 3 panel, yellow and		Zinc tacks	35		
Clauss Straps, 50 and 10 per cent.		green stained, 4-in. style, per doz.	6 75	Leather carpet tacks	55		
REGISTERS.		Common doors, 2 or 3 panel, in natural		Copper tacks	50		
Discount 40 per cent.		colors, oil finish	per doz. 8 75	Copper nails	52 1/2		
RIVETS AND BURRS.		3-in. style 20c. per dozen less.		Trunk nails, black	65 and 5		
Iron Rivets, black and tinned, 60 and 10 p. c.		SCREWS.		Trunk nails, tinned	65 and 10		
Iron Burrs, discount 55 per cent.		Wood, F. H., bright and steel, discount 87 1/2		Clout nails, blue	65 and 5		
Extras on Iron Rivets in 1-lb. cartons, 1 c.		per cent.		Chair nails	35		
per lb.		Wood, R. H., bright, dis. 82 1/2 per cent.		Patent brads	40		
Extras on Iron Rivets in 1/2-lb. cartons, 1 c.		" F. H., brass, dis. 80 per cent.		Fine finishing	40		
per lb.		" R. H., dis. 75 per cent.		Lining tacks, in papers	10		
Copper Rivets, with usual proportion burrs, 45		" F. H., bronze, dis. 75 per cent.		" " in bulk	15		
per cent. Cartons, 1 c. per lb. extra, net.		" R. H., dis. 70 per cent.		" solid heads, in bulk	75		
Copper Burrs only, discount 30 and 10 per cent.		Drive Screws, dis. 87 1/2 per cent.		Saddle nails, in papers	10		
Extras on Tinned or Coppered Rivets, 1/2-lb.		Bench, wood	per doz. 3 25 4 00	in bulk	15		
cartons, 1 c. per lb.		" iron	4 25 5 00	Tufting buttons, 22 line, in doz-	60		
RIVET SETS.		Set, case hardened, dis. 60 per cent.		ens only	60		
Canadian, discount 35 to 37 1/2 per cent.		Square Cap, dis. 50 and 5 per cent.		Zinc glaziers' points	5		
ROPE, ETC.		Hexagon Cap, dis. 45 per cent.		Double pointed tacks, papers	90 and 10		
Sisal	0 11 1/2	SCYTHES.		bulk	40		
Pure Manila	0 14 1/2	Per doz. net	6 00 9 00	Clinch and duck rivets	45		
"British" Manila	0 12	SCYTHE SNATHS.		TAPE LINES.			
Cotton, 3-16 inch and larger	0 20 1/2	Canadian, discount 40 per cent.		English, ass skin	per doz. 2 75 5 00		
5-32 inch	0 25	SHEARS.		English, Patent Leather	5 50 9 75		
4 inch	0 25 0 28	Clauss, nickel, discount 80 per cent.		Chesterman's	each 0 90 2 85		
Russia Deep Sea	0 16	Clauss, Japan, discount 67 1/2 per cent.		steel	each 0 80 8 00		
Jute	0 09	Clauss, tailors, discount 40 per cent.		TINNERS' SNIPS.			
Lath Yarn, single	0 10	Seymour's, discount 50 and 10 per cent.		Per doz.	3 00 15 00		
" double	0 10 1/2	SHOVELS AND SPADES.		Clauss, discount 35 per cent.			
Sisal bed cord, 48 feet, per doz.	0 65	Canadian, discount 45 per cent.		THERMOMETERS.			
" 60 feet,	0 80	SINES.		Tin case and dial, 75 to 75 and 10 per cent.			
" 72 feet,	0 95	Castiron, 16 x 24	0 85	Game, Newhouse, discount 25 per cent.			
RULES.		" 18 x 30	1 00	Game, H. & N., P. S. & W., 65 per cent.			
Boxwood, discount 55 per cent.		" 18 x 36	1 40	Game, steel, 72 1/2, 75 per cent.			
Ivory, discount 37 1/2 to 40 per cent.		SNAPS.		TROWELS.			
SAD IRONS.		Harness, German, discount 25 per cent.		Diaston's, discount 10 per cent.			
Mrs. Potts, No. 55, polished, per set	0 80	Lock, Andrews	4 50 11 50	German	per doz. 4 75 6 00		
No. 50, nickel-plated,	0 90	SOLDERING IRONS.		S. & D., discount 35 per cent.			
Common, plain,	4 50	1-lb.,	per lb. 0 37	Bag, Russian	per lb. 0 27		
" plated	5 50	2-lb. or over	0 34	Wrapping, cotton, 3-ply	0 24		
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R. & A. sand, discount, 40 and 5 per cent		Iron, No. 493	per doz. 2 40 2 55	Mattress	per lb. 0 33 0 45		
Emery, discount 40 per cent.		" No. 494	3 25 3 40	Staging	0 27 0 35		
Garnet (Hutton's), 5 to 16 per cent. advance		Steel, discount 60 to 60 and 5 per cent.		VISES.			
on list.		Try and Bevel, discount 50 to 52 1/2 per cent.		Wright's	0 13 1/2		
STAMPED WARE.		STAMPED WARE.		Brook's	0 12 1/2		
Plain, discount 75 and 12 1/2 per cent. off re-		Plain, discount 75 and 12 1/2 per cent. off re-		Pipe Vise, Hinge, No. 1	3 50		
vised list.		Revised list.		Pipe Vise, Hinge, No. 2	5 50		
Retained, discount 75 per cent off revised list.				Saw Vise	9 00		
				WROUGHT IRON WASHERS.			
				Blacksmith's (discount) 60 per cent.			
				parallel (discount) 45 per cent.			

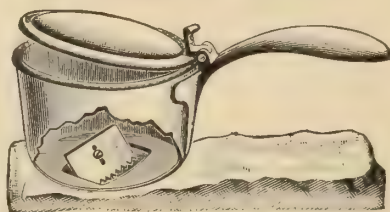
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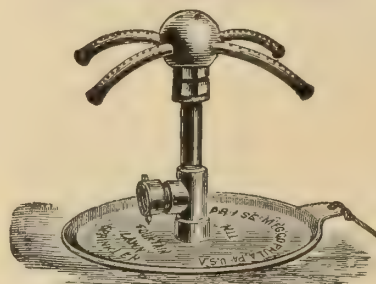
ICE SHREDDERS

For Shaving Ice, Coarse or Fine.



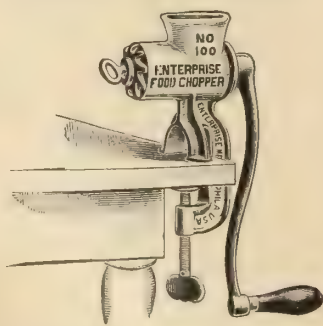
Per Doz.
 No. 33, Tinned, - \$6.00
 No. 34, Nickeled, - 15.00

LAWN SPRINKLER



No. 1, - - \$3.50

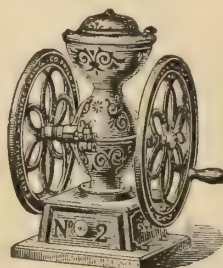
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No. 100 - \$1.50
 No. 300 - 2.25

Rapid Grinding and Pulverizing Mills

45 Sizes and Styles for Hand, Steam and Electric Power.



No. 2, - \$3.75

CHERRY STONERS

5 Sizes and Styles, Tinned or Japanned



No. 1, - \$7.50 per Doz.

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 Ontario Wind Engine and Pump Co., Toronto.
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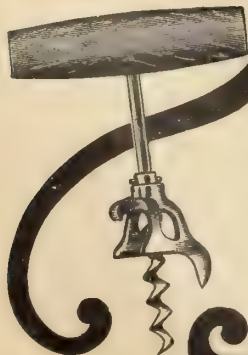
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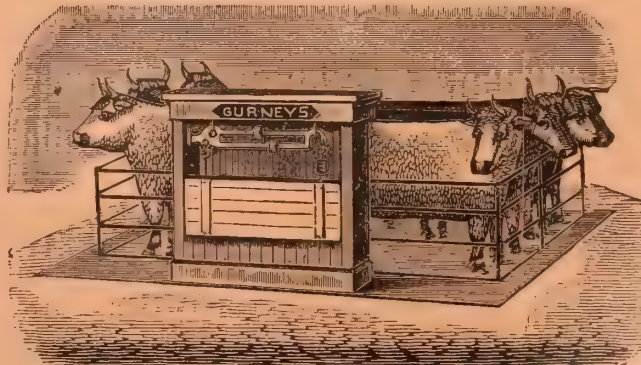
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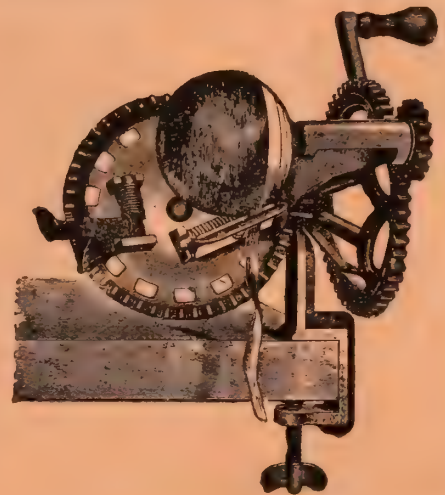
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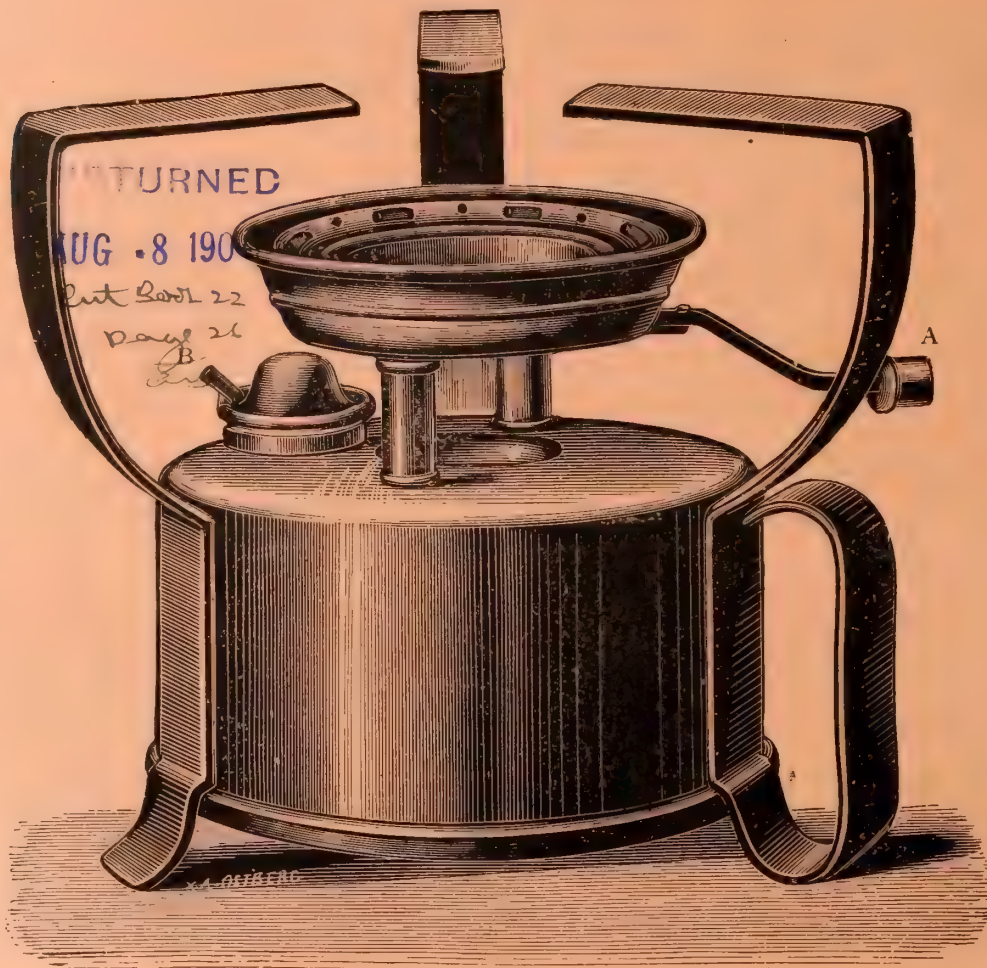
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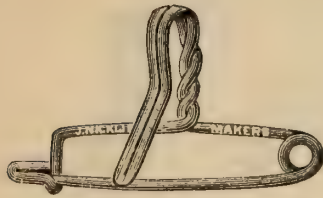


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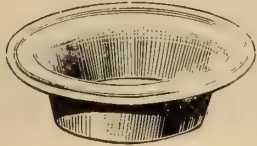
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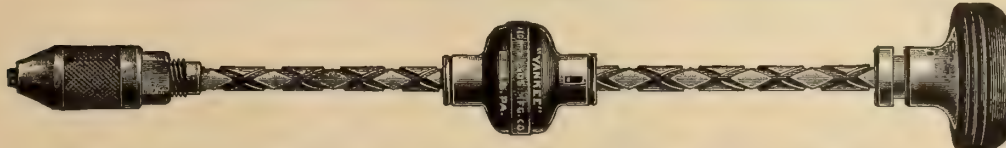
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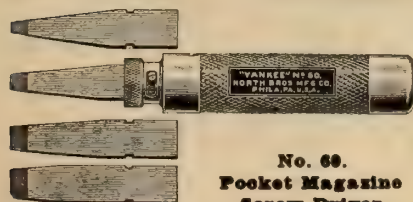
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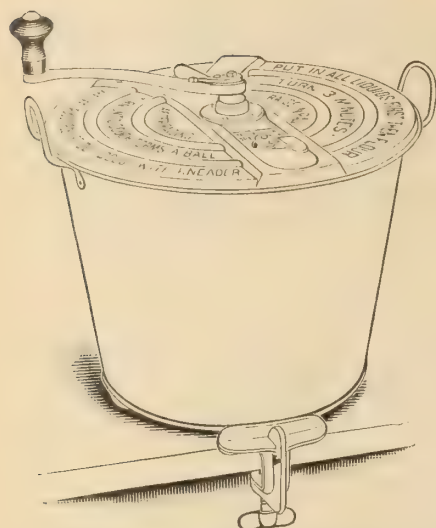
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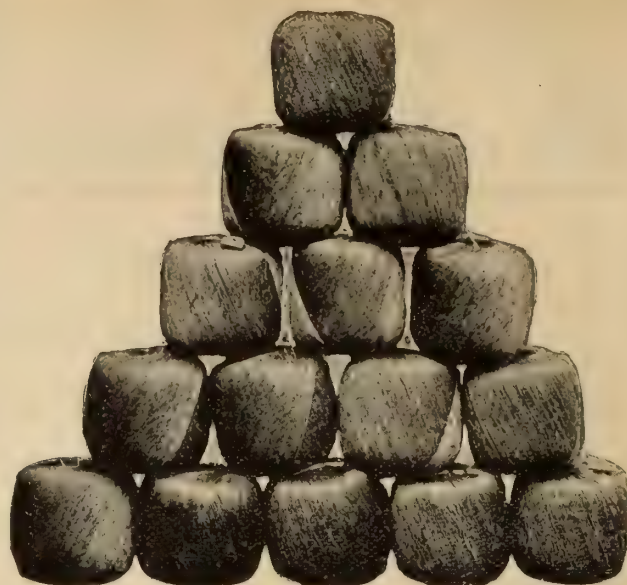
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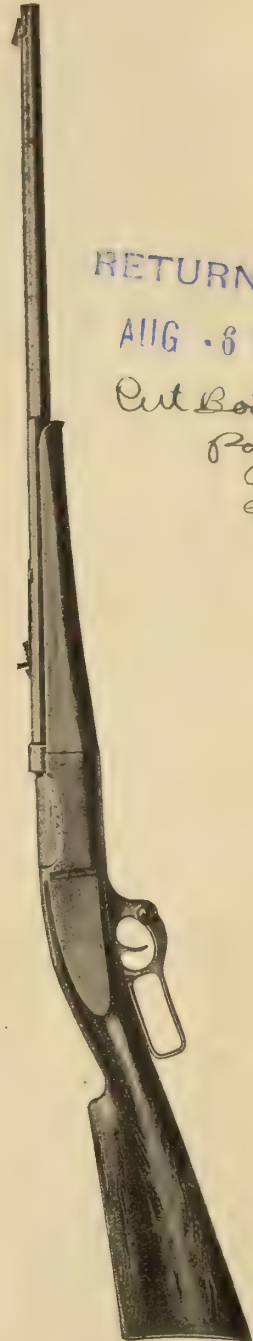
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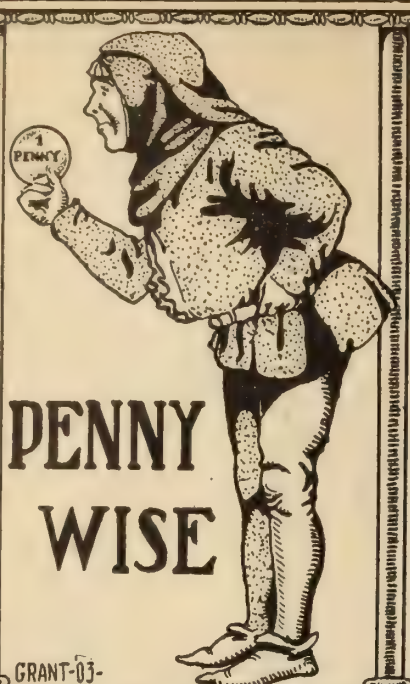
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Out Both 22
Page 23
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We would like first-rate to send it
to you if you say so.



**PENNY
WISE**

GRANT-03-

The only real value of money lies in making use of it.


The money that lies there in your safe from day to day doesn't do you any good until you commence to use it.

Then its value to you depends on how you use it.

Now, if you would only invest some of it advertising space in **HARDWARE AND METAL**, and then use the space right you'd have a valuable assistant, working to increase your trade with hardwaremen and to make yourself and your goods better known among them.

Some folks would sooner save (?) the money—but they are "penny wise and pound foolish."

But you're not.
Are you?



**POUND
FOOLISH**

Our Cap and Set Screws are British made

Now we don't expect any business men to buy from us on that account, but we can show that quality of our production is A 1, and in the matter of price, we can shade American price, and on these grounds we do expect your business—and we can make good deliveries.

THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER, ENGLAND

GLAZIERS' DIAMONDS

Sharratt & Newth

43 and 44 Percival Street, London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

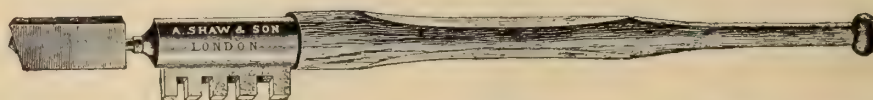
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ALSO
Lead Vices,
Carbon Tools,
Etc., Etc.,



Agents for Canada: A. Ramsay & Son, Montreal

GLAZIERS' DIAMONDS



Ahead of all others in quality and workmanship. If sparkes of fine quality, set by experts, are what you require, buy Diamonds of A. Shaw & Son's make.

Canadian Agent

GODFREY S. PELTON

388 ST. PAUL ST., MONTREAL

HAND
FORGED**CLAUSS BRAND.**BEST
MATERIALThe word **Clauss** stamped on an article means that it is good.

We warrant **Clauss** goods to be better than the best.
Write for Catalogue and latest discounts.

I. A. TOBIAS, THE CLAUSS SHEAR CO.,
Canadian Agent. 169 Spadina Ave., Toronto, Ont.

CELEBRATED

HEINISCH SHEARS

Tailors' Shears,
Trimmers' Shears,
Tinnners' Snips, etc.



ACKNOWLEDGED THE BEST.

R. HEINISCH'S SONS CO.NEW YORK OFFICE, 155 Chambers St
NEWARK, N.J., U.S.A.

HENRY T.
SEYMOUR
SHEAR CO.
NEW YORK.

SEYMOUR SHEARS

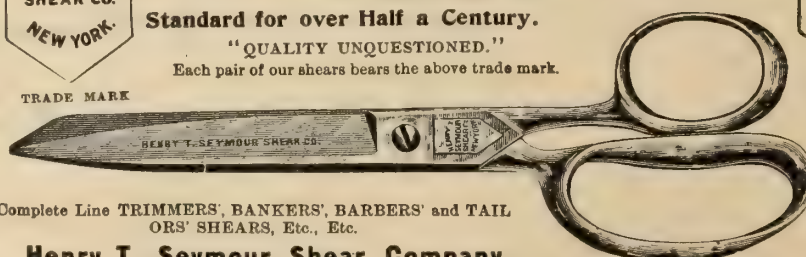
HAVE BEEN THE

Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



HENRY T.
SEYMOUR
SHEAR CO.
NEW YORK.

TRADE MARK

Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

Henry T. Seymour Shear Company.

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.

Latest Catalogue will be sent in exchange for your business card.



ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows

AMERICAN FLAT LINK "THREE CHAIN" TYPE

Also made in "CLOSED RING," "OPEN RING"
and "DOMINION" (or "SHORT") TYPES.

Oneida Community Cow Ties can be had of all the leading jobbers.
We invite correspondence where any difficulty is experienced in
obtaining our goods.

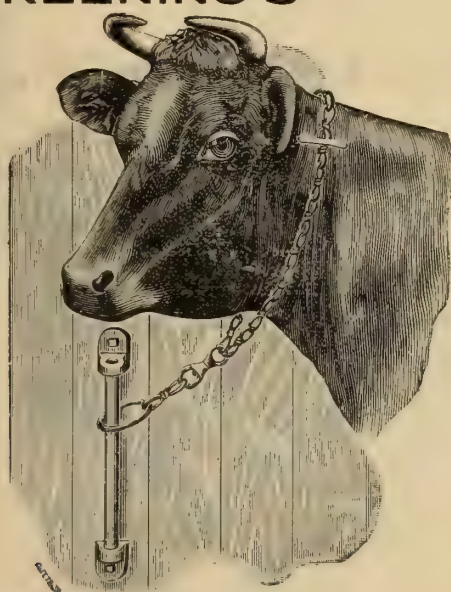
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ONEIDA COMMUNITY, Limited.
NIAGARA FALLS, ONT.

GREENING'S

5-02-20-5



PATENT COW TIES.

These Cow Ties
have stood the
test for years.
Undoubtedly the
best and strong-
est on the mar-
ket.

It will pay to handle only the best.

A complete line of all sizes ready for shipment.

For Sale by all Jobbers.

THE B. GREENING WIRE CO.,
LIMITED

Hamilton, Ont.

Montreal, Que

**RUSWIN
FOOD CUTTERS**

**EASE
OF OPERATION**

is one of the many advantages
of the Russwin Food Cutter.
It CUTS—does not tear, grind or
mash. Knives are self-sharpen-
ing—easily adapted to cut
coarse, cut fine, or pulverize.
Try it. For sale everywhere.
Made by

RUSSELL & ERWIN MFG. CO.
NEW BRITAIN, CONN.

—FOR SALE BY—

The KENNEDY HARDWARE CO, Limited
49 Colborne St., TORONTO, ONT.

STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

**WOOD SCREWS,
BRIGHT WIRE GOODS,
WIRE STAPLES.**

WIRE OF ALL KINDS
AND
FOR ALL PURPOSES.

COPPER WIRE

for
TROLLEY - TELEGRAPH - TELEPHONE
and
TRANSMISSION LINES

Manufactured by

DOMINION WIRE MFG. CO.
LIMITED
MONTREAL and TORONTO



**"Pullman"
Lawn Sprinkler**

IS YOUR
ORDER IN ?

Send for Folder No. 14.

PULLMAN MFG. CO.
Rochester, N.Y., U.S.A.

ONTARIO SILVER CO.,

Limited,

NIAGARA FALLS, CANADA.

Manufacturers of **FLATWARE, CUTLERY and
ELECTRO PLATE.**

Ask for our Catalogue and Quotations.



Dundas Axe Works

DUNDAS, CANADA.

Write for Prices

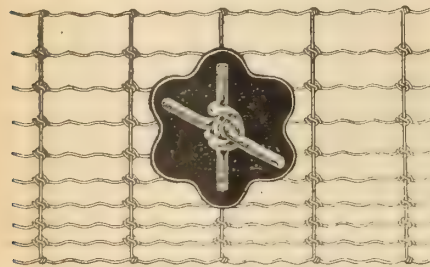
P. BERTRAM, - Manager.

A Plate With Your Name

put on the machinery you manufacture is money well spent. The cost? Tell us what you want, and we shall quote a figure.

THE PARSONS-IRONS CO.

58 Adelaide St. W., - TORONTO.



IDEAL FENCING

Is Strong and Durable, because Large Gauge (No. 9) Steel Galvanized Wire is used throughout. SEE OUR EXHIBIT AT PRINCIPAL FAIRS, or write for Catalog.

The McGregor-Banwell Fence Co., Limited
WALKERVILLE, ONTARIO.

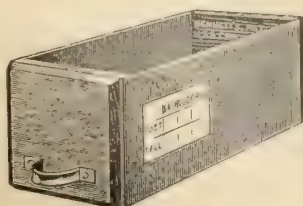
Merrick, Anderson & Co., Winnipeg, Manitoba.
Agents for Manitoba and N.W.T.

...THE...

Bennett Manufacturing Co.

Bennett's Patent Shelf Box and Cabinets
for Hardware, Grocery, Seed and
Drug Trades, etc.

Owing to
the steady
and rapid
growth of
our business
new quar-
ters were
needed.



Address all communications to our New Factory :

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SMOOTH, TOUGH, BRIGHT, CLEAN,
ALL SIZES AND WEIGHTS.

Samples and
Prices Gladly
Sent.

This design a guar-
antee of quality

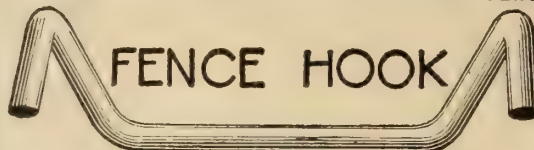
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THE TOUGHEST OF THE TOUGH
ALMOST WATERPROOF.

CANADA PAPER CO.
TORONTO LIMITED MONTREAL

GALVANIZED FENCE HOOK

FOR FASTENING WOODEN PICKET ON WIRE
FENCES



THE WESTERN WIRE & NAIL CO., Limited,

WIRE NAILS, COILED SPRING,
BARB and PLAIN FENCE WIRE,
OILED and ANNEALED, CLOTHES
LINE WIRE, STAPLES, etc.

LONDON, ONT.



J. M. MAST MFG. CO.'S

RAT AND MOUSE TRAPS

STRONGEST TRAPS MADE. PRICES EXACTLY RIGHT.

Canadian Agents: **EDWIN H. GRENFELL & CO., LONDON, ONT.**

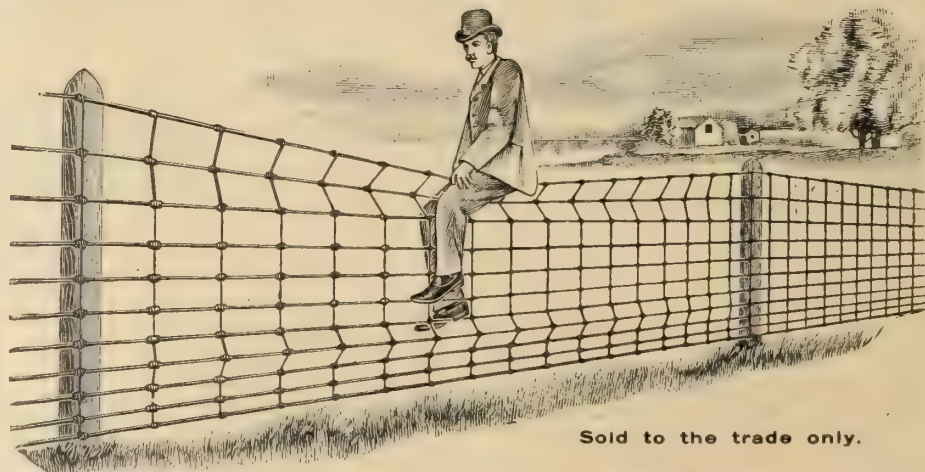
SPECIAL DROP FORGED SPRINGS

THE WALLACE BARNES CO.,

BRISTOL, CONN.

DILLON FENCING

THE HINGE IS COMPLETE, AND
WORKS WITH THE UTMOST
FREEDOM.



Sold to the trade only.

CAVERHILL, LEARMONT & CO., Agents
at Montreal and Winnipeg

Manufactured and sold by
OWEN SOUND WIRE FENCE CO., Limited
Owen Sound, Ont.

Cordage

Of every description.

Net Mountings,

Sand Line,

Unoiled Cordage,

Marline,

Extra Long Lengths,

Ratline,

Shingle Yarn.

Core Rope,

Oil Well Cables,

Russian Packing,

Deep Sea Lines,

Ancor Line,

Good Transmission Rope,

Engine Packing.

Clothes Lines,

Only Best Material Used.

Log Line

Twine.

Dangerous to use Inferior Cordage.

Mail

Orders

Now

To us and

Recieve

Exceptional

Attention.

Low-priced goods are not always
the cheapest.

True Brand Cutlery

POCKET CUTLERY

GUARANTEED QUALITY.

BEST GOODS



RAZORS

SCISSORS

RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., **Montreal**

PRICE is a good thing,—but,
QUALITY is better.

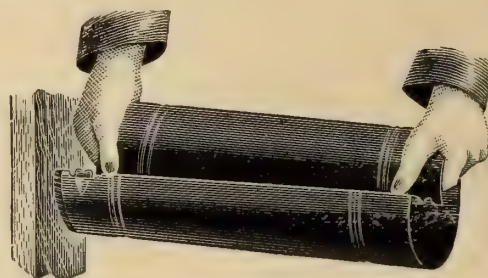
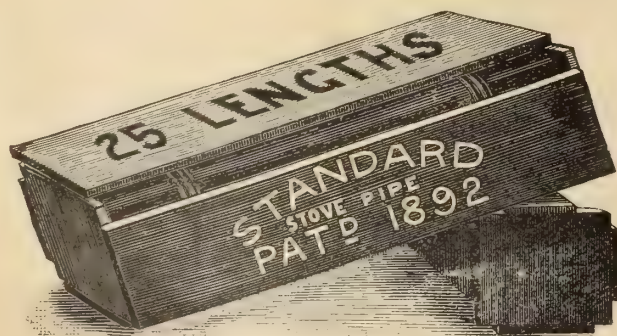
Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

Wilcox Mfg. Co. of Ontario, Limited
LONDON, ONT.

Kemp's Standard Stove Pipe { Nestable }

Easily put together, requiring neither rivets nor tools
Uniform in size, securing a perfect fit.



We carry in stock a full line of metals, comprising Canada Plate, Galvanized Iron and Black Sheets, also Tinplate, etc., which we are at all times **prepared to supply at lowest market prices.**

KEMP MANUFACTURING CO., TORONTO, Canada

VAULTS AND SAFES IN THE TORONTO FIRE

IN view of the fact that the conflagration which visited Toronto on the night of April 19th was one of the most disastrous in Canadian history, it is a matter for self-congratulation on the part of Canadian safe and vault manufacturers that the percentage of vaults and safes actually destroyed was so small. Out of sixty or seventy safes which passed through the fire, not more than six or seven failed to stand the test, while out of a correspondingly large number of vaults only two or three were destroyed. The safes burned out are believed to have been more or less dilapidated, and the two or three vaults destroyed were so manifestly

material; the latter are mostly of small or moderate size, movable and unprotected by accessory or enclosing walls.

VAULTS.

One of the first noticeable defects in modern vault construction is that of including iron rods or iron nails imbedded in vault walls, with the intention of adding strength. A second one is that of inclosing fire-proofing materials between iron plates with connecting partitions of beams or channel iron. It is evident that since

Baltimore. A thoughtless mason failed to remove a piece of scantling placed by a carpenter when constructing a balcony floor. As the building burned, the fire followed through the piece of wood into the vault and ultimately the entire contents were destroyed.

The constructive errors may be summed up as follows: (1) insecure foundations; (2) faulty and cheaply constructed doors and poor bolt-work; (3) improper attachment of doors to masonry; (4) connection



Vault with stone lintel destroyed in Toronto fire.



Vault destroyed in Toronto fire; walls connected with building walls, which fell, carrying them down.

defective it is not difficult to understand why they were unsuccessful in withstanding the fire.

The purpose of this article is to offer a few suggestions on the actual as well as the ideal construction of vaults or safes, the two classes of fire-proof or professedly fire-proof repositories. The former are fixed in position and surrounded by special walls of non-conducting and indestructible

iron, brick and cement expand at different rates on being heated, iron much the more rapidly, such additions to brick or cement work must always be a source of weakness and danger.

An example teaching the need of unremitting watchfulness and skilled oversight in vault construction is afforded by the loss of a bank vault in one of the buildings examined after the recent conflagration in

of vault walls with building walls which carry the former along with them when they fall. In (1) and (4) the inevitable result is the tumbling of the vaults: in (2) and (3) the doors warp out of place and make room for the heat and fire to enter.

In the Toronto fire the vaults which were destroyed had either defective upper roofs or walls. In one instance the vault roof was very light and simply crashed

through when the building walls began to fall upon it. In another there was a big block of stone which served as a lintel. When the heat got beyond a certain degree, the stone began to crack, eventually falling and leaving an opening over the door for the fire.

One of the leading architects of Toronto suggests that the upper vault roof should be arched, of concrete or brick, and sufficiently strong to support any weight that might fall upon it. Under no circumstances should a stone roof be used. It is risky to have any stone about a vault at all, as it easily cracks when subjected to great heat.

All steel construction work, such as girders, should be covered with concrete or terra cotta, by means of which uneven expansion is avoided in the event of fire. The inner and outer vault wall should be of brick with three inches air space between; bricks should be carefully laid with Portland cement as mortar, and joints full, with no interstices left between the ends of joints or individual bricks. Vestibules should be steel-lined, with arched heads, doors and outer doors. There should be metal bed-plates for the girders, instead of building them into the vault or building walls. The concrete filling for floors and over arches should be at least one foot thick in the thinnest places. One feature of the vaults which came through the Baltimore fire successfully was that the walls were built up solidly of hard brick laid in cement and entirely free from built-in iron work. The average thickness of the walls was about sixteen inches, and they were without exception on brick foundations built up from cellar bottoms.

SAFES.

By far the larger number of safes destroyed in the Baltimore fire were in no sense fire-proof. Heat quickly penetrated their casings, the wooden linings caught fire and contents were soon reduced to a handful of ashes and charred fragments. The question arises directly: Is it possible to make at moderate cost safes of suitable size, weight and portability which will be proof against terrific heat? Many safes in use are not fire-proof at all, and the fact would soon become evident were they subjected to a severe heat test. One reason for this is because the demand of the public has steadily been for cheapening prices. It may be stated, however, that such safes are not nearly so widely distributed in Canada as in the United States.

It has been demonstrated that safes may be constructed of moderate size and cost, and yet be able to stand against the hottest fires, except only where the entire exterior

shell is melted. Such specially constructed safes, upon being examined after severe fire tests, may be found to have their external plates much warped and partially consumed, corners burned off, and even their seams gaping; upon being opened, however, the contents will be found to be perfectly preserved.

These safes had a wall-filling of composition containing a high percentage of water in combination, held in stable position interstitially. As the heat penetrates this layer, it converts the water evenly and gradually into steam. The change from liquid to gaseous form is attended by the conversion of heat into mechanical separation of water particles, and a very large amount of heat thus rendered latent. As long as the conversion of steam is going on, the temperature does not rise. The water content of the filling thus retards the progress of heat through the walls of the safe, and so protects the box in the centre. It is therefore seen that protection is secured not to any great extent by the interposition of a non-conductor—water—but by the absorption of heat in the conversion of liquid water into vapor.

There is no other method of safe-construction known upon which entire reliance can be placed, says G. L. Damon, an American safe expert, to whom many of the above suggestions are due, in a recent issue of the Manufacturers' Record. The cost of such really fire-proof safes is about thirty per cent. above that of the average safe sold to-day; but no one will deny that the additional cost is more than made up for by the certainty of its being absolutely fire-proof.

CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

Steam Engines.

HARDWARE AND METAL has received from McIntosh, Seymour & Co., Auburn, N. Y., a handsome catalogue descriptive of the steam engines built by them. The catalogue is 12x9½ inches, and the cover is a heavy brown paper. It is intended principally to give illustrations of McIntosh & Seymour engines, of both horizontal and vertical types, together with a description of some of their constructive details, and tables giving power and floor space occupied by various sizes. These engines are suitable for use with superheated steam, and the resulting increased economy is graphically shown in the catalogue. On these en-

gines there are patent devices for the operation of alternating current electric generators in parallel.

The distinctive features of the McIntosh-Seymour engines are their positively driven flat gridiron valves, arranged to give small clearance space, the interheating receiver, and the powerful governor mounted directly upon the main shaft, which regulates the speed of the engine by changing the position of the eccentric which drives the cut off valves.

The illustrations in this catalogue are very fine, and the typographical execution is also first-class. Readers of **Hardware and Metal** who are interested in power machinery may secure one of these catalogues upon application to the firm.

Southern Stove Works.

Hardware and Metal has received from the Southern Stove Works, Richmond, Va., their stove catalogue for 1904-1905. This firm manufactures the "Standard" stoves and ranges, embracing a full line of cast iron cooks, ranges and heaters, air-tight wood heaters, smokeless oil heaters, and blue flame wickless oil cook stoves.

The blue flame wickless oil cook stoves and the smokeless oil heaters, are two new lines added this year.

The Jefferson range for soft coal, hard coal or wood, is illustrated and described in six styles; the Lexington, for coal or wood, in two styles; the Afton, for coal or wood, in two styles; the Elko, for coal or wood, in two styles. Others illustrated are the Maud, for coal only, and the Eli, for coal only. A full line of cook stoves are also described and illustrated. Stove dealers may secure one of these catalogues upon application to the company.

Awnings and Camping Goods.

J. J. Turner & Sons, manufacturers of tents, awnings, sails, camping goods and lumbermen's supplies, Peterboro, Ont., are sending out a descriptive and price catalogue of these goods. They are also sending out a small catalogue describing and illustrating horse blankets, robes, fur coats, dusters, stable sheets, etc.

Stortz & Son.

John Stortz & Son, Philadelphia, Pa., are sending out a catalogue and price list of cement workers', paviors' and contractors' tools they manufacture. There has been a steady increase in the use of cement, concrete and asphalt in the towns and cities, and consequently there has been an increased demand for this class of tools. The tools illustrat-

ed and described in this catalogue include rollers, cutters, jointers, groovers, bevel tools, step edgers, coping tools, gutter tools, trowels, tamers, name plates, etc.

Bundy Steam Traps.

Hardware and Metal has received from the A. A. Griffing Iron Co., Jersey City, N. J., a catalogue containing an illustrated descriptive treatise on the Bundy Steam Traps, used to automatically feed boilers, to return condensation to boilers, to relieve steam mains, heating coils, etc. This treatise is complete in every way, there being numerous drawings and illustrations. After the treatise are given two or three pages of the testimonials, followed by a long list of some of the users of the Bundy Steam Trap. This catalogue should prove of great interest to all steam users, and interested readers of Hardware and Metal may secure one upon application to the company.

Tool Room Grinders.

The Walker Grinder Co., Worcester, Mass., are sending out to their patrons a new catalogue describing and illustrating the new universal tool room grinders. The Walker grinders have been long upon the market, but this catalogue deals with greatly improved machines to meet modern requirements. This is a very neat catalogue, and the information contained therein would prove of interest to all who have charge of tool rooms. The Walker Grinder Co. will furnish this catalogue to interested readers of Hardware and Metal.

Magnetic Chucks.

Hardware and Metal has received from O. S. Walker & Co., Worcester, Mass., Catalogue F, illustrating and describing the Walker Magnetic Chucks and Surface Grinders. This firm's specialty is magnetic chucks, which they have been putting upon the market for five years. They claim that this line of goods has now passed the experimental stages and has settled down to standard lines.

Magnetic chucks are now becoming well known. Especially is this so in the surface grinding field. The fact that a slight charge of magnetism remains in hardened steel work has not proven the drawback one would expect, since a simple apparatus is furnished by O. S. Walker & Co. that removes almost instantly all traces of magnetism.

Corliss Engine Works.

The Corliss Engine Works are sending out a small circular, illustrating and

FLOOR FINISHES


A Special Notice to S. W. P. Agents

We have just begun a special fall advertising campaign on *Sherwin-Williams Floor Finishes*. We intend to make the line as well known as S. W. P.

We purpose placing the merits of each one of *Sherwin-Williams Floor Finishes* before the property owners of the Dominion in a way that is sure to build up their sales in every locality. We have prepared an advertising feature for this purpose that is undoubtedly by far the strongest floor finish advertising ever sent out.

We want to tell you about the entire plan in detail. Write us and we shall give you full particulars by return mail.

With *Sherwin-Williams Floor Finishes* in stock you can meet every floor finish demand in your territory with the best floor finish made.





THE SHERWIN-WILLIAMS CO.

PAINT AND VARNISH MAKERS

CANADIAN HEADQUARTERS AND PLANT:

21 St. Antoine Street, Montreal

WAREHOUSES: 86 York St., Toronto;
147 Bannatyne St., East, Winnipeg

describing their works in Philadelphia, Pa. A part of the circular is devoted to illustrating and describing their Corliss steam engine. There are also a number of testimonials.

Steam and Oil Separators.

The A. A. Griffing Iron Co., Jersey City, N. J., are sending out a catalogue illustrative and descriptive of the Bundy Steam and Oil Separator. This separator is designed to separate water from live steam and oil from condensed steam.

There are three methods open to consideration for maintaining dry steam after it leaves the boiler, i. e., superheat, pipe insulation and mechanical separators. The first means stands by itself; its efficiency is not doubted, and the question of installation is only a matter of cost. The second is efficient in that it prevents pipe condensation, but suspended moisture cannot be removed. This only can be done by means of a mechanical separator.

Gisholt Tools.

Catalogue "J-3," issued by the Gisholt Machine Co., Madison, Wis., has just been received at the office of Hardware and Metal. It describes in detail some of the lathes manufactured by this company, particularly their turret lathes, which cover a wide range. A splendid feature noticed is that two views are given, plan and elevation, and thus one gets a much better idea of the features of the machine.

A Unique Fan.

The Canada Paint Co., of Montreal, have issued a very pretty and attractive fan as a souvenir. The outside leaves of the fan are illustrated, one with the picture of a policeman, which says, "For protection, use Canada Paint Co.'s Varnish and Paint," and a lighthouse on the other, which reads, "For Safety, use the Canada Paint Co.'s White and Colors." The inside leaves are of pretty shades representing some of the different colors made by them. It makes a very attractive little fan, and readers of Hardware and Metal will receive one on application to this company.

Business Changes

ONTARIO.

J. L. REAUME & CO., stove manufacturers, Essex, have been burned out.

The stock of Peter Cameron, general merchant, Dutton, has been sold to —. Panter.

John Bloomfield, general merchant, Mooserville, has sold out to W. H. & G. Bloomfield.

QUEBEC.

The assets of J. R. Gervais, general merchant, Mount Carmel, are to be sold. J. A. Marchaud, general merchant, Fraserville, has obtained an extension.

The assets of the business of E. C. Mount & Co., plumbers, Montreal, have been sold.

The assets of Joseph Gagnon, general merchant, Pontbriand, are to be sold on the 3rd inst.

A statement of the affairs of J. H. Constantin, general merchant, Nominique, is being prepared.

Hormisdas Carignan, general merchant, St. Maurice, has assigned; meeting of creditors was held on the 29th ult.

Harry Richards has registered under the style of the English Logophone Co. & Electric Bell Maintenance Co., Montreal.

Theophile Leclair and Wm. H. McDonald have registered under style of Leclair & McDonald, contractors, Montreal.

BRITISH COLUMBIA.

The Albion Iron Works Co., Limited, Victoria, have advertised their iron works and stove factory for sale by tender.

MANITOBA AND N.W.T.

McArthur & Lyons, general merchants, Bradwardine, have sold to Butler & Cascaden.

Mortgages are in possession of the stock of McLeod & Bailey, general merchants, Elkhorn.

R. J. Stewart, dealer in implements and lumber, Holland, has sold his implement business.

E. Williams & Co., hardware dealers, etc., Stonewall, sustained slight loss by fire; covered by insurance.

The Smith Bros. Mfg. Co., Limited,

Hammer the Hammer



Absolutely Safe
Accidental Discharge
Impossible

A Test that tells the story.
A Test that no other revolver will stand.

IVER JOHNSON REVOLVERS

Are Absolutely Safe.
Accidental Discharge impossible.
Which is a **fact** absolute and demonstrable.
With others it's only a claim and theory.
Send for literature mailed free upon request.

New York Office:
No. 99 Chambers St.

IVER JOHNSON'S ARMS & CYCLE WORKS,
FITCHBURG, MASS.

Yorkton, have been succeeded by Yorkton Builders' Supply Co., Limited.

NEW BRUNSWICK.

Moses Schaffer, general merchant, Blackville, has offered to compromise at 40 per cent.

THE NORTHERN IRON AND STEEL COMPANY.

THE assets of the Cramp Steel Co., Limited, have been taken over by the Northern Iron & Steel Co. A meeting of shareholders of the Cramp Steel Co., Limited, was held in Temple building, Toronto, on July 25.

A resolution was passed endorsing the election of directors and other matters done at the meeting on the 14th inst. The auditors, owing to shortness of notice, was unable to prepare the general balance sheet and financial statement, but stated that he had audited the vouchers for expenditures and found them to correspond with the balance, and that his statement would be ready in a couple of days. On motion, the report of the auditor was adopted, and the secretary was asked to send a copy to the stockholders.

The most important business of the

meeting then came up, namely, the passing of a resolution authorizing and instructing the directors to turn over to the Northern Iron and Steel Co. the quarry lands owned by the Steel Co., also the rights of the Cramp Steel Co., Limited, to the bonus of \$60,000 from the Town of Collingwood.

This question was thoroughly discussed. The secretary read a letter from the Imperial Steel and Wire Co., Limited, of Collingwood, which company will be producing forty tons of wire daily next month, offering to start the steel works with an order for 5,000 tons of steel for wire.

HALIFAX BOARD OF TRADE.

The regular quarterly meeting of the Halifax Board of Trade was held on Thursday, July 28, Mr. J. E. de Wolfe, president, in the chair. Eight new members were added. A resolution was passed appointing a committee of five to secure some tangible token of the board's appreciation of the services of Mr. C. M. Creed, who, after forty years of service, had retired from the post of secretary. Mr. Creed has been succeeded by Mr. A. T. Weldon.

H. S. HOWLAND, SONS & CO.

WHOLESALE
ONLY.

TEMPORARY WAREHOUSE:
212-218 Cowan Avenue.

LIMITED
ONLY
WHOLESALE.

Telephone,
Office, Park 1584.

SAMPLE ROOM at 21 Scott Street (Telephone Main 4056)
(Where orders may be left if not convenient to visit our Warehouse at Parkdale)

Telephone,
Warehouse, Park 1555.

RETURNED POWDERS. RETURNED



Metal Kegs, 25 lbs. each.

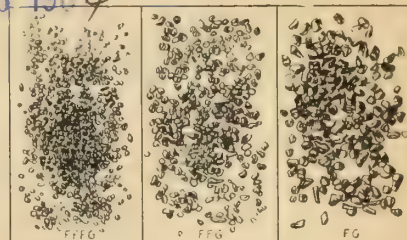
"DEAD SHOT"

Best and Cleanest Black Powder Made.

Sizes FG., FFG., FFFG., in 25 lb. Kegs.

1 lb. Tins FFG.

A most remarkably and universally popular Brand for General Field and Trap Shooting, unsurpassed by similar grades of any other manufacture.



AMERICAN RIFLE CARTRIDGE POWDER

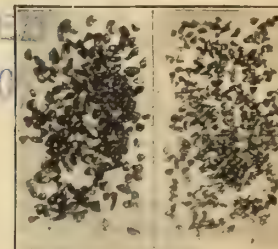
6 1/4 lb. Kegs.

Size 3. Size 4.

25 lb. Kegs.

Size 3. Size 4.

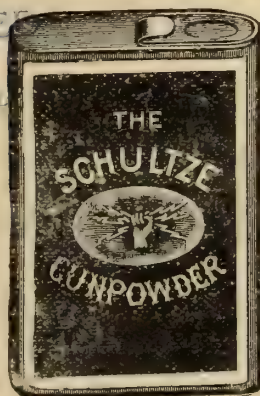
A Perfect Powder for Loading Rifle Cartridges, dense and withstands compression in loading; absolutely even and free from liability to cake behind the bullet; uniform in velocity and pressure, and moist burning. Thoroughly endorsed by the Winchester Repeating Arms Company.



GENUINE "SCHULTZE" SMOKELESS POWDER.

RETURNED
AUG - 6 1904

Best
English
Hard Grain
White Powder
Made.



Oldest
Established,
Best Known,
Most Reliable,
Safer than
Black Powder.

Absence of Blowback, Reduced Recoil, No Smoke.

No. 1 Tin, Equal in Measurement to 1 lb. of Black Powder.
No. 10 Tin, " " 10 " "
No. 50 Drum, " " 50 " "

No. 1 Tin contains 1/2 lb. actual weight.
10 " " 5 " "
50 Drum " 25 " "

"DU PONT" SMOKELESS SHOTGUN POWDER.

RETURNED
AUG - 6 1904

Hard Grain,
Quick Ignition,
Rapid Combustion,
Slight Residium.



Safe, Reliable,
High Velocity,
Even Pattern,
Great Penetration.

Absolutely Smokeless.

Canisters, Equal in bulk to 1 lb. Black Powder
Quarter Keg, " " 6 1/4 " "
Half " " 12 1/2 " "
Kegs, " " 25 " "
Drums, " " 50 " "

CAUTION. Do not use Shotgun Smokeless Powder in Rifles, or Smokeless Rifle Powder in Shotguns.

Powders can be shipped on TUESDAYS ONLY.

For Canadian Powders see our Hardware Catalogue.

H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.
Factory: Dufferin Street, Toronto, Ont.

Our prices are right.

We will send on trial to Works any size of our **HIGH-CLASS** **Corundum Emery Wheels**

made up to **60 inches in diameter**, to 12 different systems
for any variety of purposes.

Corundum Emery Saw-Sharpening Wheels

for automatic as well as for ordinary sharpening machines.

On Sale for over 30 years.

Weekly output of Emery Wheels, about 20 tons.

THE GENUINE NAXOS EMERY COMPANY



Trade Mark.

NAXOS-UNION

Frankfort-on-Main (Germany)

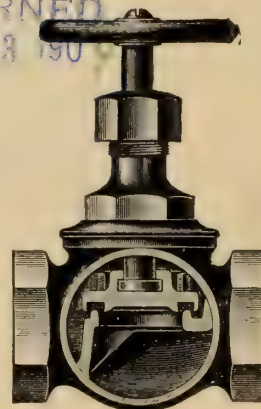
Letters : Naxos-Union, Frankfort-on-Main (Germany)

YOU CAN LEAD A MULE TO WATER BUT YOU CAN'T MAKE HIM DRINK.

YOU CAN PUT A CHEAP VALVE IN SERVICE BUT YOU CAN'T MAKE IT LAST!



Facts, like mules, are stubborn things, and the manufacturer as well as users of cheap Valves recognize the above fact. The first cost of a Valve should be the last consideration. A good many people use cheap Valves for different services, regardless as to whether the Valve and Disc are adapted to same. The man who has to pay for the Valves doesn't always do the renewing and changing himself. He therefore doesn't know all the money and time that he is losing by buying cheap Valves with the one Disc for every purpose. Fairbanks Renewable Disc Valves are built on honor. Their success is our success. You can renew the Disc in Fairbanks Valves quicker than in any other Valve made. We make four different kinds of Discs to suit different requirements. We have a lot of valuable information about Valves, and a postal or letter from you will land same on your desk the next day. We'll expect to hear from you.



THE FAIRBANKS CO.

MONTREAL

TORONTO

VANCOUVER

WINNIPEG

MACHINERY

THE MACHINERY MARKETS.

Quebec.

Office of **HARDWARE AND METAL**,
232 McGill Street.
Montreal, Aug. 4, 1904

EASTERN machinery markets continue decidedly quiet. Superintendents, foremen, and managers of shops, and manufacturing establishments, are either holidaying or thinking little of making new installations, or adding to their equipment. In some of the rural districts of Quebec the urgent call for help in the harvest fields has been met in part with men from saw mills and factories, this being possible on account of the dullness existing in the latter industries. There seems little prospect of a revival for a few weeks, but dealers are optimistic, and anticipate a large business in the early Fall.

While machine tools and wood-working machinery are in little demand, the general contractors' supplies business is good, and considerable trade is being done in that line. Electrical machinery continues about the same, and the demand for smaller supplies is fairly good. Enquiries are much less numerous than usual.

Ontario.

Office of **HARDWARE AND METAL**,
10 Front Street East.
Toronto, Aug 5, 1904.

The machinery market still has a quiet tone. Local dealers have enough to keep them busy, but that is all. Very many inquiries have come in and are still coming in, but not very many are materializing. The reason assigned for this is the holiday season.

Enquiries seem fairly well divided among the different classes of machinery. Machine tools have been prominent, and also engines and boilers. Wood-working machinery also makes a good showing.

Local dealers are very hopeful of numerous and substantial orders being placed in time. Some firms say that the outlook for the Fall is very good—indeed unusually so.

Rife Water Engine.

Machinery Editor of **HARDWARE AND METAL**:

Regarding the inquiry of your subscriber for the makers of the Rife Water Engine, would say that it is manufactured and sold by the John McDougall Caledonia Iron Works Co., Limited, Montreal.
F. S. K.

Machinery and Electrical Notes.

THE Qu' Appelle, Long Lake & Saskatchewan Railway Co. are going to build a \$250,000 steel bridge over the river at Saskatoon.

The City of Kingston has at last taken over the electric lighting plant.

The steel framework for the new Goldie-McCulloch Co.'s shops at Hunter's Corners, near Galt, Ont., is now in place.

The foundry of H. Dixon, Collingwood, Ont., has been destroyed by fire. The loss is estimated at \$8,000, with insurance of \$2,000.

A new power plant is being erected by the Levis Electric Railway. The power house is situated at foot of Bennett's Hill, Levis, Que.

H. W. Petrie, Toronto, has just closed an order for a complete saw mill and shingle mill outfit, including engine and boiler, from Charpentier & Guyard, Sturgeon Falls, Ont.

The Crow's Nest Pass Coal Co., Fernie, B. C., are having a 700 pound steam hammer and a large combined punch and shears forwarded from Toronto by H. W. Petrie.

The entire cost of the G. T. R. roundhouse at London is estimated at over \$75,000. Connected with the roundhouse there is to be a machine shop for all minor repairs to locomotives.

The directors of the Locomotive & Machine Co., Lonque Point, Que., have authorized the expenditure of \$100,000 for the construction of an hotel and several dwellings on the property owned by the company at Lonque Pointe.

Among the orders received by H. W. Petrie, Toronto, for power machinery, are: a 50 h. p. Wheelock automatic engine and horizontal boiler for the Woodstock Cereal Co.; engine and boiler

for Thorold Steam Laundry; 50 h. p. horizontal boiler for Geo. McKenzie, Wingham; and a large high pressure marine engine for W. R. Boucher, North Bay.

It is now announced in Victoria, B. C., that the Kootenay Central Railway will soon be under construction. It is learned that two lines will be run. One from Jaffray on the Crow's Nest line following the base of the mountains north as far as Wasa, where it will then cross over to the west side of the Kootenay. This is considered the most favorable route, as from previous preliminary surveys it has been demonstrated that a grade of four-tenths of one per cent. can be obtained for the entire distance. A second or trial line is now being run from Fort Steele Junction as far north, on the west side of the Kootenay River, as Ta Ta Creek.

The Fairbanks Canadian Factory.

IT is understood that The Fairbanks Co. have purchased the plant of the Northrop Iron Co. at Valleyfield, Que. This plant was established about five years ago for the manufacture of looms, but owing to various mishaps it was not a success. The plant was built in a most modern fashion in every respect, consisting of large foundry, large machine shop, 232 feet long by 66 feet wide; foundry, 115 by 55 feet; blacksmith shop, 68 by 34 feet; wood shop, 89 by 48 feet; pattern shop, 41 by 48 feet; dry kiln, storage sheds, cupola house and other buildings. A siding of the Canada Atlantic Railway runs through the ends of the machine shop and foundry into the storage sheds.

The Fairbanks Co. will manufacture there a full line of their scales, valves and other specialties. The matter has not been definitely closed, however, owing to some formalities in connection with arrangements with railway companies and the town, yet to be definitely settled.

ADVANTAGES OF A FUEL ECONOMISER.

IT is a recognized fact that the most economical boilers are those which have the most rapid circulation, and to obtain this circulation the temperature of the escaping gases must be considerably above the temperature of the steam. What the ratio should be to obtain the highest economical results is a subject on which engineers differ very widely. With the high pressures now in use, and gradually increasing, the temperature of the gases increases in proportion to the temperature of the steam generated, and thus the necessity

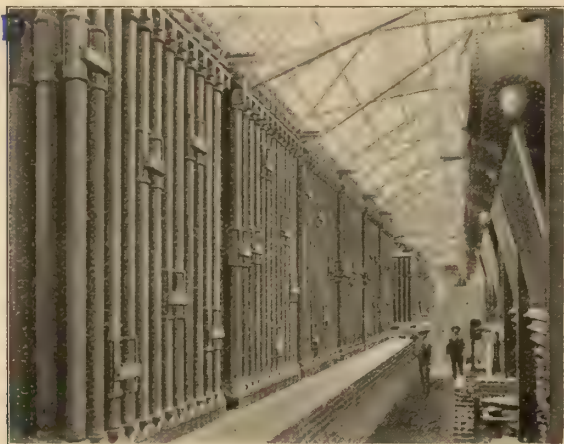
travel continuously up and down the tubes at a slow rate of speed, the object being to keep the external surface clean and free from soot, a non-conductor of heat. The mechanism for working the scrapers is placed on the top of the economizer, outside the chamber, and the motive power is supplied either by a belt from some convenient shaft or small independent engine or motor. The power required for operating the gearing, however, is very small.

The apparatus is fitted with blow-off and safety valves, and a space is pro-

ably above what can be obtained by other means; a great volume of water always is in reserve at the evaporative point, ready for immediate delivery to the boilers; utilizes in a practical way heat from the escaping gases which otherwise go to waste; prolongs the life of boilers by the high temperature of feed-water, preventing the usual expansion and contraction; considerable sediment in the feed water is deposited in the economizer (where it can be easily blown off) by reason of slow circulation and the high temperature obtained; increases the boiler efficiency by adding to its heating surface.

The reputation of Green's Economizer is not confined to the United States, Canada and Great Britain alone. It is in operation all over the continent of Europe, and is as well known in the spinning mills of Russia and India as in those of Canada, the New England States and New Jersey. It is as equally noted among the gold mines of South Africa as in the textile factories of China and Japan. Some measure of the general recognition of the value of the economizer is afforded by the fact that since its inception it has been applied to over 250,000 boilers representing 50,000,000 indicated horse-power.

This machine is manufactured by The Green Fuel Economizer Co., Matteawan, New York.



The Green Economiser—In course of Erection.

of economizers becomes greater to utilize this heat.

The economizer illustrated consists of a series of sets of cast iron tubes about four inches in diameter and nine feet in length, made in sections (of various widths) and connected by "top" and "bottom headers," these again being coupled by "top" and "bottom branch pipes," running lengthwise, one at the top and the other at the bottom, on opposite sides, and outside the brick chamber which encloses the apparatus. The waste gases are led to the economizer by the ordinary flue from the boilers to the chimney. The feed water is forced into the economizer by the boiler pump or injector, at the lower branch pipe nearest the point of exit of gases, and emerges from the economizer at the upper branch pipe nearest the point where the gases enter. Each tube is provided with three bevel-edged scrapers, which

are provided at the bottom of the chamber for the collection of the soot, which is removed by the scrapers.

The tubes are made from a mixture of the best American pig, cast vertically in dry sand moulds, and are guaranteed to be of equal thickness and free from blow holes throughout. Every tube is carefully tested to a pressure of 350 pounds on the square inch.

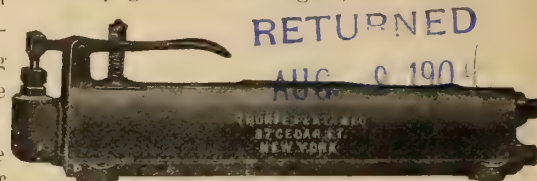
Equal care is taken in the construction of headers. The joints of the tubes and headers are all conical, turned and bored metal to metal and forced together by powerful hydraulic pressing machinery especially designed for the purpose.

The cut shows the machine in the course of erection. The advantages of an economizer may be summed up as follows: Saves from 10 to 20 per cent in fuel; heats the feed-water economically to high temperatures, consider-

Geipel's Steam Trap.

THE duty of a steam trap is to separate the water of condensation from the steam, discharge the water and hold the steam. The time to do this is immediately after condensation. The proper place to accomplish this is close to the heater or the coil, and the way to do it is continuously.

Every steam pipe, or steam cylinder, or steam coil should be fitted with a drain cock, to drain off the water which collects through condensation. If a steam pipe is not drained, the water in it may get into the engine, and cut out



the packing in the engine glands, and perhaps break the cylinder cover if the engine be started too suddenly. If a drain cock is not automatic steam will

be blown off and coal lost at one time, and at another there will be trouble with water in the steam. Wet steam is very uneconomical, and very hard on packing and wearing surfaces. If a steam cock is placed at every point on the steam line, where it is possible for water to collect, the steam will be kept dry. If the steam cock is automatic it will mean a saving of tons of coal that are used up where drain cocks are used that are not automatic. When engine cylinders and steam jackets of cylinders have automatic drain cocks to discharge the water which collects when starting up, and the condensation when running, considerable economy is effected by this means.

The Geipel automatic steam trap, which is illustrated, embodies points of particular interest. It has no internal levers, or working parts boxed in, and exposed to the action of the steam and water. It will work equally on cylinder or steam pipe, and in any position. The valve is always open to the atmosphere, except when steam is passing, therefore the water drains away from the steam pipe as fast as it collects, even before steam is turned on. The valve can be opened by hand to blow through. It can be left open if desired, and is easily examined and replaced. These traps are handled by the Fairbanks Co., who represent the manufacturers in this country.

Pneumatic Bradding Machine.

Hardware and Metal has received an inquiry for the manufacturers of a "pneumatic bradding machine," which is said to be in universal use in Canada by door manufacturers. Can any of our readers give us information on this subject? Communications should be addressed to machinery editor, Hardware and Metal.—Machinery Editor.

The New Allis-Chalmers-Bullock Co.

IN presenting to the general public a comprehensive review of a country's industrial growth for more than half a century, it is necessary to refer to some concerns that cannot claim notice on account of their age, but simply on account of their importance from a national standpoint. Although they have not about them a halo of years, they nevertheless afford opportunities to form an idea of the lines along which future industrial activity is likely to move, just the same as the older companies serve to show the sources of in-

CONDENSED MACHINERY ADVERTISEMENTS.

YEARLY CONTRACT RATES.

100 words each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
" " " 6 months.....	10 00
25 " " " 1 year.....	10 00

MACHINERY WANTED.

Notices under this heading inserted free for subscribers to **HARDWARE AND METAL**

CIRCULAR shears and double seaming machine, in good order. Moore Bros., Bradford, Ont. (29)

MACHINIST.—Wanted, a good machinist for general repair work; steady job. W. G. Paton, Wingham, Ont.

ONE second-hand 8 horse-power gasoline engine. Address Box 225, Dutton, Ont.

POWER PRESS, for stamping, weighing 850 to 1,500 lbs. George Coleman, Ridout street, London, Ont.

VERTICAL engine wanted; about 28 x 28, with fly wheel, about 16 feet diameter, 12" x 12" rim. Box 5, Globe, Hamilton.

WANTED—36 x 36 in. x 10 f. planer; 16 ft. lathe, 24 in. swing; and No. 500 belt drivers' drop hammer. Address Box M 145, **HARDWARE AND METAL**, Toronto.

WANTED TO PURCHASE—On approval, a good second-hand gasoline engine; five or six horse-power. W. G. Paton, Wingham, Ont.

MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

ENGINE LATHE—Swings 17 in. over shears, takes 4 ft. between centres; good order; cheap for cash. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

FOR SALE CHEAP.—Medium size lathe; 25-pound power hammer; large wet grinder—all in perfect condition. F. E. McKyes & Co., 428 Visitation street.

GAS AND GASOLINE ENGINES.—Fairbanks, 1 to 100 h.p.; stationary, portable and marine; fully guaranteed; reliable and economical. Write for catalogue and prices. The Fairbanks Company, Toronto.

IRON PLANER—24 in. x 24 in. x 6 ft., second-hand in first-class condition, for sale; a quick turn over. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

JARDINE PATENT PIPE DIE—One man can thread a 2-in. pipe at one cut. Write for circular. A. B. Jardine & Co., Hespeler, Ont.

MARINE ENGINE.—Fore-and-aft compound; 5-in. and 10-in. x 6-in., with suitable submerged tube vertical boiler; complete yacht outfit. Apply The Polson Iron Works, Toronto.

MACHINE TOOLS for prompt delivery—Planers, shapers, lathes, drills, bolt cutters, milling machines, punches and shears; also, full line of machinists' supplies. Good second-hand machinery taken in exchange. Show room open 7 a. m. to 11 p. m. H. W. Petrie, Toronto.

MACHINERY for 50-barrel flour mill; nearly new. Tenders will be received by the undersigned for the purchase of machinery of a 50-barrel flour mill, planifter system, steam power. Steam plant and machinery will be sold separate if necessary. Highest or any tender not necessarily accepted. For further particulars apply to F. P. Shaw, Thessalon.

NEW STATIONARY ENGINES — 20 x 24 Waterous sawmill engine; 14 x 18 Waterous sawmill engine; 9 x 10 McEwen engine; 13 x 14 McEwen engine. Waterous, Brantford.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

ONE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

THE STUART MACHINERY CO., LTD., 764-766 Main street, Winnipeg, sole agents in the West for MacGregor Gourlay's wood working and iron working machinery, than which there is none better. Also for Beardmore's leather belting, Dodge wood pulleys and self-oiling hangers, Soule steam feeds for sawmills; E. Leonard & Son's engines and boilers, Stratford flour mill machinery, etc., etc., etc.

THE FAIRBANKS CO.—Temporary warehouse, 124 Bay—standard scales, valves, trucks, letter presses, shafting, hangers, pulleys, belting, mill supplies, machine tools; "Fairbanks" gas and gasoline engines; write for price list.

AN 8-ft. Irwin trussed cornice break, in good condition. J. O. Cadham, Portage la Prairie. (32)

BUSINESS CHANCES.

A CHANCE for practical machinists, shop and tools for sale or rent; central location; three lathes, swing two feet, sixteen and twelve inches; iron planer, 24x24x6 feet; one large and one four-spindle drill; emery jack and other tools; motor power and dynamo for lighting; immediate possession. John Rodger, Hamilton.

FOUNDRY PLANT FOR SALE.—First-class foundry and machine shop; also up-to-date brass plant and valve patent, the best in America; machines up-to-date, patterns complete; sold together or in two parcels. Good business, location right. A bargain, good reasons for selling. Apply to Box 450, Mail and Empire.

MACHINE SHOP and moulding shop for sale; some of the machinery nearly new; business will be sold as a going concern. T. R. Atkinson, Simcoe, Ont.

SITUATIONS VACANT.

WANTED—Five good machine hands; accustomed to working on sash and doors; three good all-round machine men for upstairs planing mill work; please give experience in each case and state wages expected. Apply at once and address Lock Box 105, Mount Forest, Ont.

SITUATIONS WANTED.

WANTED—Situation—Mechanical draftsman or assistant; technical graduate; experienced. Address Albert Wahn, Neustadt, Ont.

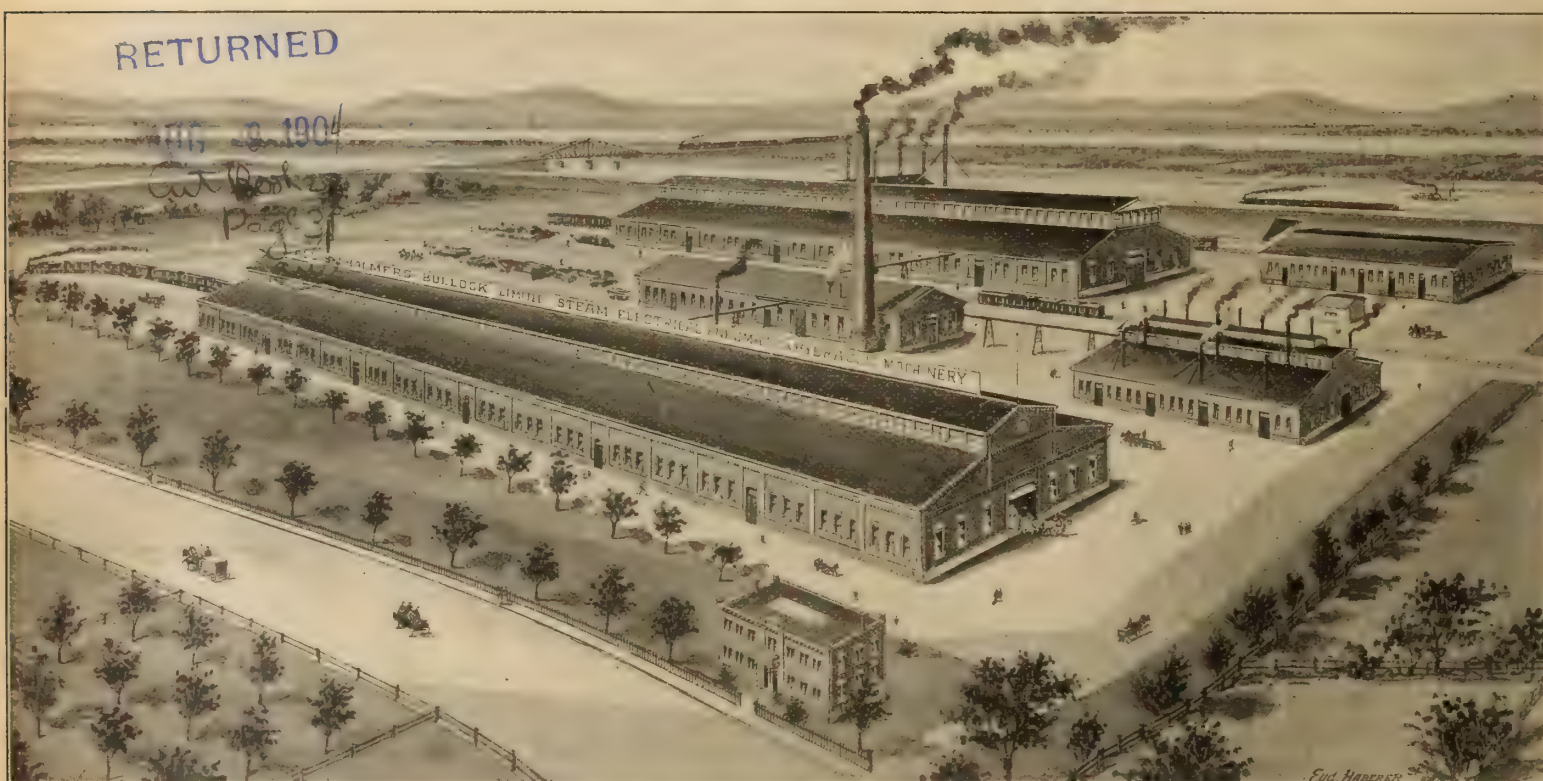
dustrial growth and expansion in the past.

The outstanding concern in this respect is undoubtedly the newly formed Allis-Chalmers-Bullock, Limited, the headquarters of which is at Montreal. This company was formed to take over the business and representation in Canada of the Bullock Electric Manufacturing Company, the Allis-Chalmers Company, the Ingersoll-Sergeant Drill Company, the Lidgerwood Manufacturing Company, the Wagner Electric Manufacturing Company.

To simply mention the names of these

able experiences of the most eminent and skilled engineers in America at a minimum of cost. It would be impossible for Canada in her present stage of development to maintain a staff of experts such as is represented by the various concerns already mentioned, and it is therefore, a source of satisfaction to know that in the special circumstances when skill of this kind is desired it can be obtained through this company at a rate in keeping with the conditions that affords an instance of how industry will be assisted and development induced in the immediate future.

ters, stone channeling machines, pneumatic hammers, riveters, chippers, metal drills, pile drivers, quarry bars, stone chippers and dressers, air lift pumps and ticket canceling boxes. Through the Lidgerwood Mfg. Co.—Hoisting engines, cableways, log-hauling machinery, hoisting and conveying apparatus and ballast unloaders. Through the Wagner Electric Mfg. Co.—Switchboard instruments, single phase motors and transformers. Through the Allis-Chalmers Co.—Corliss engines, piston and centrifugal pumps, water and steam turbines, hoisting engines, blowing engines, turbo blowers, ore crushers, roasting and smelting ma-



New Works at Rockfield, Que.

five concerns gives but a very faint idea of what the amalgamation of their representation in Canada means. Briefly, it means that this one concern, the Allis-Chalmers-Bullock, Limited, have at their command for the benefit of Canadian enterprises where power and machinery are used all the resources of these various companies represented by them. In other words, it means that any Canadian company or individual can through the connections of the Allis-Chalmers-Bullock, Limited, procure the services and inval-

The formation of the Allis-Chalmers-Bullock, Limited, means also that this one single concern is in a position to supply almost any machinery for any motive power, be it steam, electricity, water, gas or compressed air. The following will give an idea of what they can supply: Through the Bullock Electric Manufacturing Co.—Direct current machinery, alternating current machinery, railway equipments and arc lamps. Through the Ingersoll-Sergeant Drill Co.—Rock drills, air compressors, coal cut-

chinery, ore milling machinery, concentrating machinery, conveyors, mining and ore cars, perforated metals, crushing rolls, ore stamps, cyanide, chlorination and lixivation machinery, cement and rock-breaking machinery, wire cloth, boilers, true vanners, machinery for stamping or classification, sawmill machinery, gas engines, brick and brick-making machinery, sugar machinery, flour mill machinery, and a general line of shafting, pulleys, tighteners, fans, etc., for transmission of power.—Toronto Globe.

IT WILL PAY YOU



to stock the best globe valves "made in Canada."

KERR'S are made of the best steam metal, accurately fitted and perfectly tight.

CATALOGUE FOR THE ASKING.

THE KERR ENGINE CO.,
WALKERVILLE, ONT. Limited

SPECIFY



INJECTORS

PENBERTHY INJECTOR CO.,
LIMITED.

BRASS MFRS.

Windsor, Ont.

MADE IN CANADA



Threshermen, Attention!

The Threshing belt that gives the greatest satisfaction is the "MAPLE LEAF"

Stitched Cotton Duck Belt

MANUFACTURED ONLY BY THE

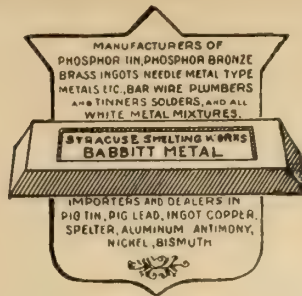
DOMINION BELTING COMPANY

HAMILTON, ONTARIO. Limited

Ask your dealer for it and take no other.

Beware of Imitations

Our "MAPLE LEAF" Belt Dressing is the best on the market—made only by us.



Wherever a Babbitt Metal can be used

Manganese Anti-Friction Metal

will answer the purpose.

We guarantee every pound to give perfect satisfaction.

Syracuse Smelting Works,

Montreal,
New York,
Seattle.

ASK YOUR DEALER FOR IT.

H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.
Steel and Twist Barrels
Superior in Design, Workmanship
and Finish, and the most popular
Gun on the Market.

Simplest
"Take Down"
Gun Made



HARRINGTON & RICHARDSON ARMS CO.
Also makers of H. & R. Revolvers.
Catalog on request. Worcester, Mass., U.S.A.

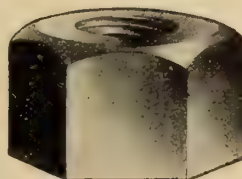
BABBIT

NO. 1
STAR
SPECIAL
HERCULES
METALLIC
IMPERIAL

THE
QUALITY & PRICE TO SUIT
ALL GRADES OF WORK

CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



REMEMBER

We are the only Canadian manufacturers of

COLD PRESSED NUTS

Finished, Semi-Finished, Case Hardened,
Plated, Polished, etc.

SPECIAL DISCOUNTS TO THE TRADE

CANADA FOUNDRY COMPANY

LIMITED

Head Office and Works, TORONTO, ONT.

District Offices — Montreal, Halifax, Ottawa, Winnipeg, Vancouver, Rossland, Calgary.

THE NEW NAIL WORKS.

THE new plant of the Maritime Nail Works, St. John, N. B., which replaces that destroyed by fire some months ago, is now completed, and operations have been resumed. The present building is considerably larger than that formerly operated and includes in addition to the former plant all the increased facilities which the firm had planned for and which were actually under way at the time the fire occurred. It contains an area of 10,000 square feet of floor space and is in most parts a two-storey building.

In the heart of the building, as it were, are placed the boilers and engines. These occupy altogether a space of 35 feet by 70 feet. The boilers are 5½ feet in diameter, 16 feet long, and each capable of producing 125 horse power. Above rise two large stacks approximately 100 feet in height. The engine, which is a new one of 250 h. p., has two fly wheels, one for driving the wire, horse shoe and screw department, and the other the wire nail benches.

The northwest section is given up entirely to the horse shoe nail department. This section is situated near the wharf, and here a crane will be erected to lift the raw material from the vessels directly into the warehouse. The material comes from Sweden. Between 2,600 and 3,000 pounds of nails will be turned out daily.

Connected with this is the wire department. This is a one-storey structure. From 300 to 100 tons of wire will be drawn each month.

The drawn wire is trucked into the wire nail department, where there are 16 nail machines, capable of turning out all sizes of nails from the quarter inch brad to the nine inch spike.

In the second storey of this same building there will be a machine shop in which the company intend, as in the past, to build all their own machines and make repairs. Four lathes, a shaper, a drill press, planer, and milling machine are being installed. Seven or eight men are permanently employed in this shop.

The rest of the upper floor will be given up to the wood screw manufactory. This is a new departure for the firm, and they will go easy at first, but have facilities for turning out 250 gross per day if the demand requires it.

MR. T. J. DRUMMOND.

MR. THOMAS J. DRUMMOND, whose portrait Hardware and Metal takes pleasure in presenting in this issue, is one of the leading "captains of industry" in the Dominion of Canada. A modest, unobtrusive

man, who would prefer comparative obscurity to publicity, his extensive business interests and the leading part he has taken in the management of enterprises, in the fortunes of which the people of Canada are peculiarly interested, have nevertheless brought him prominently into the public eye.

At the present time, his connection with the reorganized industries at Sault Ste. Marie, now happily on a fair way to prosperity, is attracting attention to him as a man of affairs. Canadian iron and steel industries are still in their infancy, but under the management of such men as Mr. Drummond it is confidently believed in Canada that it will be shown even to the satisfaction (or discontent) of Andrew Carnegie that they are no "mirage."

Undoubtedly the secret of Mr. Drummond's success as a business man is his



Thomas J. Drummond.

The best judges of a man's worth are the associates and subordinates with whom he works, and with all such Mr. Drummond's capacity for hard persistent work. On all matters relating to the iron and steel industries of Canada he is an acknowledged authority, and to the solution of technical problems relating to these industries he brings the knowledge of an expert. This knowledge which is so essential to one in his position has been gained by constant study, and could scarcely be more complete if his experience were practical.

Mr. Drummond's friends can testify how this knowledge has been obtained. Many of them have found him on a Winter evening in his handsome Montreal residence delving deep into the

puzzles in technical books relating to the iron and steel industries. It is his technical knowledge which has enabled him to take such a prominent part in laying the foundations of Canada's iron and steel industries.

Drummond's popularity is well known. Always courteous and considerate of others, he enjoys the esteem of all those with whom he is associated.

Mr. Drummond's business interests are varied, and a glance through the list which follows shows what a busy man he is.

He is a member of the firm of Drummond, McCall & Co., Montreal, in which he is associated with his brother, George E. Drummond, president of the Canadian Manufacturers' Association and of the Montreal Board of Trade. He is president of the Montreal Pipe Foundry Co., and of the Londonderry Iron & Mining Co. He is a director of the Canada Iron Furnace Co., vice-president of the Lake Superior Corporation, and of the Montreal Water & Power Co. He is also a director of the Imperial Life Assurance Co., and he is an ex-chairman for Canada of the National Founders' Association.

Mr. Drummond is a member of the St. James Club, the Montreal Club, the Canada Club, and the Engineers' Club, of Montreal, and also of the Toronto Club of that city.

REPORT OF NICKEL CO.

The International Nickel Co., of which the Canadian Copper Co. is a constituent part, has published its second annual report showing net profits for the year ended March 31, '04, before providing for exhaustion of minerals, to be \$341,102, a decrease of \$218,000. There was also a decrease of \$365,000 in current assets. One of the reasons attributed in the report for the adverse financial showing is "The extraordinary large sum of money which has just been expended by one of our principal constituent companies, the Canadian Copper Co., in the establishment of a new and most efficient plant, now just approaching completion, which has been paid for in cash from assets."

The report also includes this statement under general remarks: "While

WIRE NAILS TACKS WIRE

Prompt Shipment

The ONTARIO TACK CO.
Limited
HAMILTON, ONT.

most of the improvements outlined in our report of last year have been completed, the reconstructed works of the Canadian Copper Co.'s plant are not yet wholly in operation; yet we are far enough along to convince us that our saving in the item of fuel for power alone will be very large, and we fully believe that other economies anticipated will be realized."

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NEWMAN'S INVINCIBLE FLOOR SPRINGS
Strong, Quick, Reliable, Effective.
Will close a door against any pressure of wind. Far ahead of ordinary door springs, pneumatic or otherwise. Ask your wholesaler.
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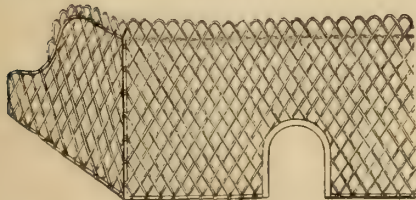
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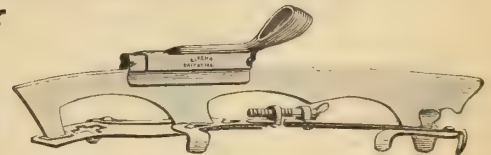
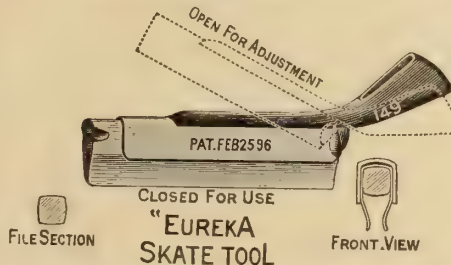
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ELECTRICAL GOODS AND SUPPLIES

Electric Heating.

VERY little attention has been paid in Canada to the use of electricity for domestic purposes, other than for lighting. This is probably due to the fact that the public generally have not been educated to the advantages offered by electricity for heating and cooking.

At a recent meeting of the National Electric Light Association, a paper was read by Jas. L. Ayer on this subject, in which he gave a review of the possibilities and described some of the apparatus in use, with power required for operating.

He says that there are many electric heaters of small current consumption effective in supplying wants that gas cannot meet. Electric curling iron heaters, for example, use 50 watts, and are rarely in service for more than a few minutes at a time. The electric heating pad or substitute for a hot water bottle is an invaluable device when required, and uses but 50 watts. Electric flat irons are made for sewing room use of 200 or 300 watt capacity, and though frequently in commission the period of operation is short, so that the monthly consumption of current is small. They save many trips to the kitchen for a hot iron to press a seam or a bit of lace. An electric tea-kettle or stove using 200 watts, or a small cup with heater, will produce afternoon tea for two, heat milk night or day, heat shaving water, and is of much value in the sick room. With two small stoves, a breakfast of eggs, toast and coffee can be prepared on the dining table while you wait, and you will not wait as long as usual. A chafing dish, of course, is more useful for general cooking in the dining-room, and until one has "lived with an electric chafing dish," he does not know its possibilities. These require 200 or 500 watts, according to the size, and are cheaper to operate at lighting rates than the alcohol kind. An automatic coffee urn for the breakfast table does its work perfectly in from ten to twenty minutes, using 200 to 400 watts, according to size. For the man of the house, inclined to tinker, an electric soldering iron, using from 100 to 200 watts, is useful, as well as a small glue pot.

All of the above mentioned articles are usually supplied with lamp socket plugs, and are sold ready to connect.

Nothing in the way of special work is required to put them into service; their operation is quickly understood, and most are of such low price as to be easy to introduce. Such articles are the best possible advocates for the more extended use of the electric service in the household, and will do much to make a satisfied customer. The fact that, except the heating pad, none of the articles are at work for more than from ten to thirty minutes at a time, makes the aggregate for the month but a small addition to the total bill, yet a material gain to the station, for it is added output on existing service wires, and the articles serve as missionaries for the central electric supply station.

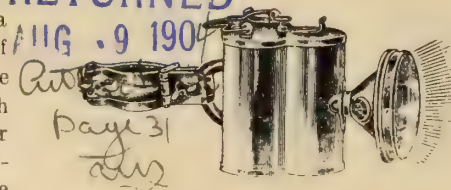
Bicycle Lamp.

AMONG the lines handled to advantage by hardware dealers are bicycles and their accessories, of which the lamp is by no means the least important. Most municipalities compel the use of a bicycle lamp at night, not only for the safety of the bicyclist, but for the public generally. There is a good deal of satisfaction in having proper

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light, and here, as in other cases in which a bright light is essential, electricity excels.

The cut shows one of the Reliable lamps, handled by the Sayer Electric Co., of Montreal. The lamp is beautiful in appearance, the body being of highly polished nickel. It has a superior lens, and ruby and emerald side light, and a three cell battery, which may be renewed at small cost.

Electricity vs. Gas.

BEFORE electricity can be made at all popular for domestic service, it will be necessary that people should not only know the advantages it possesses over gas, but also that its price for domestic use, such as heating and cooking, should be reduced somewhat. It already has a wider field than

its competitor, gas, and would probably be much more used but for its higher cost.

Electric lighting, too, it may be called to mind, costs more than gas directly; but its many advantages, such as cleanliness, convenience and safety, are gains that are now appreciated to have a cash value. In houses where the work is in the hands of the ignorant "help," there is not a good field to-day for electric cooking; but in the home where the mistress is the cook, entirely, or in part, and in small houses in suburban towns and the smaller cities, the field is wider. The freedom from heat, offensive products of combustion, and leaky valves; the inevitable soot, dirt, and chance explosions incident to gas, and the absence of all cooking devices between periods of use, owing to the portability of electric heaters, are tangible advantages in addition to the more perfect results obtained. In thousands of homes gas is used as an auxiliary to the coal range for some of the lighter meals at all seasons, and for much of the general cooking in Summer, when the range is not required to be put in commission for other purposes.

Neu-Catrice Lamp.

THE Neu-Catrice lamp was introduced to the notice of the mining fraternity at a recent meeting of the Institution of Mining Engineers. It has small accumulators, two cells in all, and the electrolyte is contained in such a way that the lamp can be held in any position without spilling the fluid. Small charging plugs are provided, and the lamp can only be lighted when a small shutter—connected with the switch—is closed and the charging plug withdrawn. In one size the whole apparatus weighs rather less than 4 lbs., and gives 0.8 candle power for 11 hours; a larger size weighs 5 lbs., and gives 1 candle power for 15 hours. A special charging table is used, on which the lamps—connected in series—are charged daily by the colliery dynamo. The cost of maintenance has been found, at the Bruay collieries, to amount to one half-penny per lamp per diem. The total working cost of electric mining lamps has been found to be seventy-five cents per lamp per annum more than that of the ordinary oil lamp; but this does not seem to be a high price to pay as an insurance against explosion in mines, more especially in cases where the atmosphere is dangerous.—Electrical Magazine.

We make Electric Fixtures, Sockets and Cut-Outs.

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Electrical Supplies of all kinds.

MONTREAL.

Electric Car Signal.

THE Canadian General Electric Co., Limited, Toronto, are putting upon the market the Haycox Electric Car Signal. This signal has been designed to meet the demand for an inexpensive and practical device for signaling electric cars to stop at night at cross roads, flag stations. It is well adapted for suburban and interurban railways for the use of patrons in the suburbs and rural districts.

The signal is very simple in construction, consisting of three incandescent lights under a hood closed in on two sides. The lamps are fed from the trolley or feed wire, and there is a convenient switch with which the patron may turn on the lights. The signal can be seen by the motorman at a distance of 1,000 feet, so that he has ample time to stop the car at the required place. Lamps of 220 volts and 16 candle-power are required for the signal.

CARRYING A MESSAGE TO GARCIA

THE other day we called on the manager of the branch office of an important firm of iron and steel factors. Our friend's assistant was away on a vacation and we found him half way through with a pile of corre-

spondence, just calling a clerk and giving him a memorandum to call up a certain railroad office and get a rate on some material between two points. By and by the clerk came back and laying the memorandum down on the desk with a satisfied air announced that he called up the railroad people and they had promised to look the rate up and telephone later. With less impatience than the circumstances warranted our friend handed the memorandum back and told the clerk to keep it until he could come back with the rate noted thereon. Who is there in business who is not continually having experiences like this? It does seem that it is a very small proportion of humanity that can draw a clear distinction between going through the motions and actually doing things. The clerk mentioned is not likely to become assistant or head of the office very soon. Probably he spends a considerable part of his time wondering why his salary is not increased.

Another friend of ours ran across a man who he thought might be worth something and offered him \$75 a month to come with him. After he had had him a couple of months he asked him what he had been getting at his previous situation and was told it was \$65 a month. Then he said to the young man: "Well I hope you will soon be worth \$125 a month to me." The young man expressed his surprise, saying he

had never been talked to that way before. Our friend explained to him that he had no time to bother very long with any man who was not worth at least \$100 a month in such a position.

This is the other side of the question. Perhaps there would be fewer mediocre clerks who do not realize the importance of accomplishing things and saving bother to their employers if employers as a class took more pains to draw out their employees.

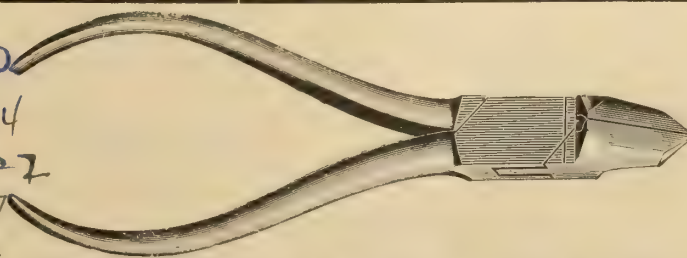
FOR EXHIBITORS' CONVENIENCE.

The new administration building on the grounds of the Canadian National Exhibition in Toronto, will prove a great convenience to exhibitors. In one large room have been grouped the representatives of all the buildings and all the departments. Whether one is showing a traction engine, a thoroughbred horse, or a dainty piece of embroidery, entries can be made and display arranged for by application at this central office.

Exhibitors in several different sections, who, through lack of accommodation, have been compelled to go from one point to another to arrange for their reservations, will particularly appreciate this movement of the management to minimize their difficulties.

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Page 27
M.L.S.



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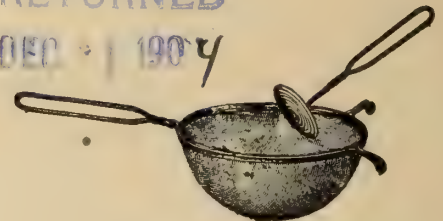
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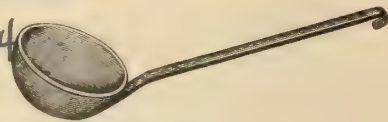


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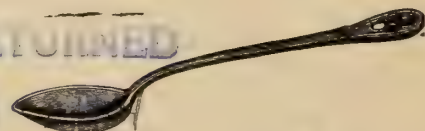


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Made in four sizes.

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THE EMPLOYER AND CLERK.

IN last week's issue was published a letter from R. F. B., in which the writer dealt with the relations which should exist between the employer and employe in the hardware store. The writer says that most business men of to-day hold aloof from their clerks. He thinks that this is most detrimental to the business; that the clerks are in a position to give some practical hints to the manager; and that if the merchant wishes to make the greatest success of his business he should make it a point to consult his clerks in all the details.

There is a great deal of truth in what R. F. B. says. In union there is strength, and if the manager of a business works in unison with his clerks, he is working along a line of policy that will help him on to success. If the manager does not consult the views and opinions of his clerks, but goes ahead on his own policy, he cannot expect that they will work with him; they cannot, because they do not know how he is

working. The clerks are left out in the cold, so to speak, and they cannot take a great interest in their work.

Everyone likes to be consulted about the work they are helping to carry out. It is human nature. If the manager consults his clerks he is showing them that he recognizes their ability to suggest, and in doing so he is awakening a desire in them to be able to make valuable suggestions. The result is that the clerk is ever on the lookout for ways and means of improving the business. His interest is awakened, and he works for the welfare of the business as well as for his salary.

The manager should not stop at consulting his clerks; he should let them know that he appreciates any suggestions they make by giving a fitting reward in the way of promotion or increase of pay for valuable suggestions. Then the clerks will see that in working for the firm they are working for themselves; they will recognize that their interests are identical with the firm's. That condition—the condition where the employer and employes have the same aim—is a firm foundation on which to rear any business.

Perhaps some business men doubt that they could get any suggestions from their clerks. Any merchant who thinks thus should sit down and consider for five minutes the positions held and the work done by his staff of clerks, and then it is very doubtful if he would make the assertion again that clerks are not in a position to make suggestions. An intelligent clerk is in a much better position to recognize little detail needs and detail faults than the manager is. It is impossible for him to keep the details of a large business in mind. He must rely for that on the ones he puts in charge. In business the details must not be shirked, and that is a good reason why the manager should consult his clerks.

It is doubtful whether the first statement made by R. F. B., that most business men hold aloof from their clerks, is altogether accurate. A large number do, but not the majority. Surely over half of our business men are more broad-minded than that. It is to be hoped so.

THE DOMINION EXHIBITION.

AS an indication of the growing importance of the Canadian west, the Dominion Exhibition, which was concluded this week at Winnipeg, is significant. Such an exhibition, representative of the interests of a whole country, is never held in a city or province only just coming into existence. It is only possible where a community has reached a high state of development, intellectually and materially. The Winnipeg Exhibition accordingly marks a new phase in the history of western Canada, and a turning point in its career.

That the people of eastern Canada are alive to the importance of the west has been demonstrated by the number of exhibits, as well as by the number of representatives, sent west by eastern firms. A few years ago the managers of such firms would never have contemplated such a step. To-day they are only too anxious to improve their footing in the west.

The exhibition will undoubtedly be of the greatest benefit, not only to exhibitors but to the nation generally. No better way of bringing east and west into sympathetic touch could have been devised. Visitors to the exhibition seeing the interest taken by the east in their city and country, will appreciate their fellow-Canadians more, and easterners will understand better the magnitude and needs of the west.

THE BILLBOARD EVIL.

IN the United States the billboard evil has grown to such proportions that stringent legislation has been necessary to abate the nuisance. Some of the most beautiful suburban scenes along country roads, or beside railway tracks have been completely spoiled by the unsightly boards which rise up and deface the landscape. For mile after mile the traveler's weary eye is confronted with these hideous spectres, and no wonder there has been a loud outcry against them.

The Municipality of Cleveland has just adopted a comprehensive building code, which contains a most significant pro-

vision relating to signboards, and the City of Boston has done the same. Societies have been formed and agitations started which will certainly bring about good results.

We in Canada have not yet had our fairest scenes invaded by the billboard, but the day will certainly come if something is not done to prevent it. With the principle of billboard advertising we have no quarrel. There are instances when billboards have been known to shut out most unpleasant prospects from the vision, and there are dreary and barren spots where the colors of a bright billboard add life and relieve monotony. There are also many legitimate positions where billboards may be erected to advantage and no complaint will be heard.

But the placing of signboards in the very centre of a beautiful natural scene is going a little too far. Would Muskoka and Georgian Bay be the same delightful and restful spots if at every turn the weary business man, seeking repose, were to confront a green and yellow signboard? Only a very sordid individual would think so, and there are few such in this country, let us hope. Even the wisdom of the advertiser might be questioned in this case. There is such a thing as aversion.

Signboards, like everything else, have a use, and a big use, but they must be used at the proper time and place.

A REBATE QUESTION.

HAS a manufacturer of any patent article the right to reduce his price without allowing the jobber the amount of such rebate on stock in store, or must the loss fall on the wholesaler? We have recently been asked this question, and unless there are special clauses in the primary purchase order precluding any such allowance on the part of the manufacturer, it strikes us that, in order to be fair and just to the trade, the manufacturer should remit to the jobber amount of rebate on stock carried when reduction is made. By saying "fair and just" is meant fair and just not only to the jobber who has carried the goods in stock for long periods and interested himself and his travelers in the sale of the goods, but

also fair to the retailer. It may be said that the notice of reduction in price is given in plenty of time to allow the jobber to dispose of his stock, or reduce it to such a small compass that the loss of the rebate is unworthy of argument, but why should the jobber unload on the retailer and "stick him"? Why should the retailer pay a higher price for the article now when he can purchase it to better advantage in a few weeks or a month?

It is generally understood, and an uncontrovertible trade fact, that the manufacturer as a rule has the largest profit, particularly on articles that are patented, and it seems to us that he can best afford to make the reduction to the jobber. As a matter of policy to retain the good will of the jobber and his interest in the further handling of the goods, the manufacturer, if he is wise and experienced, will get over the question by freely and gracefully sending the credit note. Of course, if this is done, a statutory declaration from the jobber might be required as to the actual number of barrels, or cases, etc., on hand, and this declaration would, no doubt, be readily furnished.

There seems to us to be no question as to the best way of disposing of this matter, which is one that not infrequently enters into transactions between manufacturers and wholesale grocers. It cannot be argued that the jobber is "squealing" unjustly, as the goods are not bought in the open market subject to its fluctuations, but are private, patent articles, to be bought only through a certain channel, at fixed prices, and under stated conditions of sale, and the purchaser has no chance of getting them on the drop and selling them again when the market has recovered. If the manufacturer makes a reduction, it argues chiefly that he has been able to buy his raw material cheaper, or through improved processes of manufacture cost of production is lessened to warrant a concession to the trade and retailer,—he is therefore not the loser. There are a number of manufacturers who follow the right rule of protecting the jobbing and (through the jobber) the retail trade by sending credit notes to the amount of stock on

hand. Experience has taught them that this is the easiest and pleasantest way to retain the interest and good will of all concerned.

PUT WIRES UNDERGROUND.

THERE was borne home to every witness of the Eby-Blain fire in Toronto last week the vital importance of doing away with those unsightly and dangerous overhead wires with which corporate selfishness impedes our streets. On the west side the tower could not be brought anywhere near the building on account of the wires and in the front the ladder was raised only to be held back by an entangling mass of these ugly barriers.

It is true they were cut in a few minutes, but a few minutes may mean the saving or destruction of millions of property.

In the down town portion of a crowded city there is no excuse for overhead wires. They should be put underground at once, and business men should see that the proper steps are taken to effect this end.

BUSINESS MEN'S VACATIONS.

IT is a mistaken idea on the part of many that because a man has two weeks' vacation in the Summer he should crowd every minute of the time with physical exertion of one kind or another,—tramping, canoeing, hunting, golfing, or the like.

To men who have been accustomed to sedentary occupations the good of such a radical change in their mode of living is doubtful. What most persons need is genuine rest. The trouble is that the majority who get a vacation are so afraid that they will not have a good time that they tire themselves out in trying to get it. So far for the physical side of the case.

Mentally the situation is different. If a man is of a social nature and does not see much of people in his business, he will be profited by going to some place where there are congenial people. If, on the other hand, his business requires him to meet many people, he will find recreation in solitary places.

INCONSISTENT.

CANADIAN manufacturers as a rule recognize the growing importance of the west, and admit that United States firms are showing a most aggressive spirit in seeking the business of the country. They acknowledge the necessity for Canadian firms getting in on the ground floor at the present time. Many of them have personally visited the field and have seen the needs of the case for themselves, and they all agree that the situation is grave and calls for immediate and careful action.

When they have conceded so much regarding the case one would naturally expect to find them taking every possible step to establish themselves in the western markets. Apart from mere words, we would expect actions.

But this is just where many manufacturers exhibit a remarkable inconsistency. With an almost stoic indifference they appear to be letting opportunities slip by, which are being only too eagerly snatched by their rivals across the line. It is to be hoped that the exhibition just concluded at Winnipeg will be instrumental in accomplishing some good, however little.

WAGES AND COST OF LIVING.

THE Washington Bureau of Labor, in its last monthly report, contains some remarkable statistics, comparing the increase in wages since 1890 and the increase in the cost of living over the same period. An extended investigation was made. Families in thirty-three states, representing the leading industrial centres of the country, were taken and their income and expenditure figured out.

Data as to wages and hours of labor were collected from 67 leading industries, embracing 519 distinctive occupations in 3,429 establishments. This data showed that the number of employes in 1903 had increased .3 per cent over 1902 and 33.2 per cent over 1890. The wages per hour in 1903 had increased 3.6 per cent over 1902 and 16 per cent over 1890. With the single exception of 1896 there was a continuous and steady increase in wages from 1894 to 1903, and this was

accompanied by a decrease in the hours of labor per week of 3.2 per cent and an increase in the number of employes in the establishments reported on of 34.3 per cent in that period.

The weekly earnings per employe in 1903 were 2.7 per cent higher than in 1902, 14.9 per cent higher than in 1894 and 11.2 per cent higher than in 1890. The weekly earnings of all employes covered by the reports were 5 per cent higher in 1903 than in 1902, 54.4 per cent higher than in 1894 and 48.1 per cent higher than in 1890.

Comparing the increase in the weekly earnings per employe with the changes in the retail prices of food weighted according to family consumption it is seen that weekly earnings in 1903 were 2.7 per cent higher than in 1902, while the cost of food was .5 per cent less. The weekly earnings per employe in 1903 were 14.9 per cent greater than in 1904, while the cost of food was but 10.6 per cent greater. The weekly earnings per employe in 1903 were 11.2 per cent greater than in 1890, while the cost of food was but 7.7 per cent greater.

OSHAWA WIRE FENCE CO.

THE first or organization meeting of the new board of directors elected at the annual meeting of the Oshawa Wire Fence Co. on July 14, was held at Oshawa, on Thursday, July 28, when all the directors were present, as follows: Messrs. F. L. Fowke, T. H. Everson, John Currie, Thomas Baker, and M. A. James.

The directors expressed themselves as being well satisfied with the general condition of the concern and were strongly in favor of the resolution unanimously passed at the annual meeting recommending extension of the business and increasing the capital. Propositions were submitted by Manager Everson in accordance with this decision, which were very fully discussed and will be submitted to the shareholders at a meeting to be called for August 27 for adoption or otherwise as they may deem proper. At the same meeting in pursuance of a notice given by Mr. Merton at the annual meeting an effort will be made to increase the directorate with the object of having fuller representation of farmers on the board, upon

whose advice the manager will be assisted and guided concerning the farmers' needs in wire fencing, gates, etc.

CANADIAN IMPORTS AND EXPORTS.

ACCORDING to the latest report compiled at the Ottawa Customs Department, the total imports entered for consumption in the Dominion during the month of May were \$21,477,676, as compared with \$22,486,315 for the same month last year; and for the 11 months ending May was \$220,750,180, in comparison of \$202,705,294 during the same period last year. Of the grand total \$133,160,293 was for dutiable goods and \$83,554,878 for free goods. The coin and bullion for the 11 months amounted to \$3,735,009. The duty collected during May was \$3,512,569, and for the 11 months \$36,698,790, being over \$3,800,000 ahead of those for the same time last year.

The total exports for May were: Domestic products, \$10,732,383; foreign products, \$451,635, compared with \$7,517,706, and \$743,491 respectively. For the 11 months the domestic products were \$174,291,791, and foreign products \$12,123,174, as compared to \$189,375,624 and \$9,992,979 for the same time last year. From the Dominion during the aforesaid month \$5,858,726 worth of goods was exported to the British Empire and during the 11 months \$115,040,445. To the United States this country exported \$4,746,517 worth of goods during the month and \$61,109,547 during the 11 months; to Belgium \$1,010,383 for the latter period, to France \$1,414,377, and to Germany \$1,755,506.

For the 11 months the total imports of dutiable goods from the British Empire was \$46,966,827, the general tariff value \$5,641,228; the preferential tariff value \$39,991,417, the surtax tariff value \$640,997, and the free goods consumption, \$19,196,146. The total dutiable and free consumption was \$65,469,788. The grand total as regards imports from the United States was \$129,795,576. The general tariff amounted to \$68,698,939, and the surtax to \$137,875. The total dutiable and free consumption goods from Germany was \$7,516,464, and from France \$5,583,897. At the port of Ottawa such imports amounted to \$4,176,613, the consumption dutiable \$2,457,435, the consumption free \$1,713,687, the domestic exports \$58,922.

MARKETS AND MARKET NOTES

QUEBEC MARKETS.

Office of HARDWARE AND METAL,

232 McGill Street.

Montreal, Aug. 5, 1904.

FROM every quarter glowing accounts have been received of a bright outlook for the coming harvest, and the effect of this is felt to a considerable extent in the hardware business. Retail dealers are sanguine of a big Fall trade, and consequently are sending in large orders for Fall shipment. Sporting goods, fishing tackle, and ammunition are unusually active. The ordinary Summer trade is the duller this week than it has been during the season, although in some lines a very fair business is done.

The cutting of prices in wire nails still continues in the local market. While quotations are nominally the same there is no pretense that these are followed, and relations between the manufacturers and jobbers are somewhat strained on this point. In some other lines a few prices have been changed. Mrs. Potts irons have been lowered. Sash cord, cotton bed cord, wrapping twine, etc., are five per cent. lower, and guns have advanced 25 to 35 per cent.

Agricultural Wrenches—The market continues brisk. We quote: 6 in., \$2.85 a dozen; 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

Skates—A large business is expected in this line. We quote the following prices: Halifax pattern, plain, 38c a pair; nickeled, 60c a pair; Ladies nickel plated, plain 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50 a pair; hockey, plain steel 30c a pair; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop \$1.30 a pair, high grade nickel plated, concaved \$1.60 a pair.

Hockey Sticks—Prices are: Second growth men's \$4.00 a dozen; second growth ash, men's, \$3.30 a dozen; rock elm \$2.35 a dozen; boys' elm, \$1.50 a dozen.

Hockey Pucks—Price quoted for coming season is \$2.10 a dozen.

Lanterns—This line is selling well. We quote. Cold blast, \$7.00 a dozen; No. 0 safety, \$4.00 a dozen.

Sleigh Bells—We quote: Brass team bells, rough \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5.00 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3.00 each.

Washing Machines—These are in somewhat lessened demand this week, and but few orders are coming in. We give the following quotations: Round (three legs), \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

Spring Hinges—The market is quieter than usual at present. We quote the following: No. 5, \$17.25 per gross; No. 19, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

Heavy Screw Hooks and Hinges—There is little doing in this line. Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

Wire Coat and Hat Hooks—There is a fairly active demand which has continued throughout the season. Prices continue 75c a gross for 3 inch.

Churns—Merely a nominal trade is being done, discounts 40 and 15 per cent. f. o. b. Montreal, and 30 and 10 per cent. f. o. b. factory.

Screen Wire Cloth—The season for screen wire cloth is pretty well advanced, and consequently the demand is somewhat lessened. Prices, as before, \$1.50 per hundred square feet.

Poultry Netting—The poultry netting season is also pretty well over and the demand is smaller. Discounts for 2 in. 19 gauge standard extras are 60 and 5; for 2 inch 16 gauge the discounts are 55 and 5 per cent.

Annealed Hay Wire—There is a brisk and very active market in this line.

Prices and discounts remain the same as before.

Galvanized Poultry Netting Staples—Business is rather quiet in this line. Sizes 5-8, 3-4, 1 1-8, 10 lb. follows: Sizes 5-8, 3-4, 1 1-8, 10 lb. boxes \$12.50 list; 25 and 50 lb. boxes, \$12.25 list; 100 lb. boxes, \$12 list. Less 57 1-2 per cent.

Fence Staples—The market is brisk and a fair business is reported. We quote: \$3.00 per 100 pound keg for galvanized, and \$2.80 for bright; 25 to 50 lb. packages, 25c extra.

Barb Wire—The barb wire business has been good all season, and continues. We quote: \$2.75 per 100 lb. f. o. b. Montreal, and \$2.50 f. o. b. Cleveland. Car lots of 15 tons, \$2.40 f. o. b. Cleveland.

Galvanized Wire—An ordinary trade has been done this week. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In car lots f. o. b. Cleveland, No 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than car lots 12 1-2c extra per 100 lbs. will be charged.

Rivets and Burrs—These are still selling well. Discounts: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

Screws—An active market continues with no change in price, while stocks are well up. Discounts are as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass flat head, 80 per cent.

Bolts and Nuts—There is no change this week, in either price or demand, the latter being good. We quote: Carriage bolts, common (\$1 list),

3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

Cut Nails—There is still the usual steady business being done in cut nails. We quote as before, \$2.30 per keg f. o. b. Montreal, Hamilton, Toronto, and St. John.

Wire Nails—The cutting of prices in wire nails still continues in the local market, and while quotations are nominally the same, there is no pretense that these are followed, so that relations between the manufacturers and jobbers are somewhat strained on this point. Business continues brisk. We quote: \$2.40 per keg car lots, and \$2.45 per keg in small lots f. o. b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford, and St. John.

Pressed Spikes—No change in this market, which is fair. Discount as before, 25 per cent.

Horse Shoes—These continue in ordinary demand, with no change in price. We quote the following: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

Horse Nails—In fairly active demand. We quote as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list; other brands, 55 per cent. off list.

Sporting Goods and Supplies—The

business in these lines this year promises to be unusually active, and wholesale dealers are prepared for a big trade. The prices of the different lines on application.

Shot Guns and Rifles—There is already a good business doing in these, with a promise of much more in the near future. Prices are lower than last year, which has no doubt influenced the sales. They advanced this week 25 per cent to 35 per cent.

Ammunition—The demand is reported brisk. The advance noted in American loaded shells last week, still holds. The discount which was 30 per cent. is now 17 1-2 per cent. We quote: Rim fire cartridges, 30 and 2 1-2 discount from list; centre fire, 5 per cent. advance on list.

Roofing Pitch—Business is good in this line. Price as before \$1.00 per cwt.

Building Paper—As there is considerable building going on through the country the demand for building paper continues good. Prices remain the same. We quote: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

Fire Brick—There seems to be no tendency towards a change for the better in this market.

Cement—As is the case with fire brick, the cement business continues dull, with little likelihood of an early revival. Prices remain unchanged at former quotations, which are: Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex cars.

Cordage—A continued average business is the condition in cordage this week. There is a reduction of 5 per cent. on the quoted prices of cotton goods. British pure manila, 11 1-2c; pure manila, 14 1-2c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

METALS.

This market continues fairly quiet, and for the most part metals are moving rather slowly. Pig iron, as before, is in little demand. Merchant steel and tool steel are somewhat quieter, but are moving fairly well. Briskness exists in black sheets and Canada plates, which are more lively than usual. The prices quoted on these are still subject to concession. A good many orders have been placed for galvanized iron for Fall shipment. Tin was firmer during the week, but closing prices are the same as last. The advance in copper noted last week, of one quarter cent per pound, still holds. There is a scarcity of this metal at present. Pig lead continues firm. The scrap metal market remains unchanged, which is almost at a standstill. Sheet zinc is somewhat weaker this week, having fallen slightly in price. All other prices continue firm.

Pig Iron—The pig iron market is dull, and little or no business is being done in that line. Prices continue unchanged.

"Disc," No. 1.....	\$17.50 delivered Montreal.
"Dom.," No. 1.....	18.50 " "
Usual difference in price for lower grades.	
Ferrona No. 1.....	\$18.00 delivered Montreal.
" No. 2.....	17.50 " "
" No. 3.....	16.50 " "
" No. 4.....	16.00 " "
Londonderry.....	\$18.50 to \$19.00 delivered Montreal.
Summerlee.....	18.75 " "
Glengarnock.....	20.00 " "
Gartsherrie.....	19.25 " "
Carnbroe.....	18.50 " "
Carron No. 1.....	19.00 " "
" (special).....	17.50 " "
Ayresome No. 1.....	17.50 " "
" No. 3.....	16.90 " "
Clarence No. 1.....	16.25 " "
" No. 3.....	16.00 " "

Bar Iron—A very active business is being done on all sides. Prices continue, merchants bar, \$1.75; horseshoe iron, \$2.00; forged iron, \$1.95.

Merchant Steel—There is a fair demand for this, although not as active as formerly. We quote the following: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.35; machinery (iron finish), \$2; square harrow, \$2.45.

Tool Steel—As is the case with merchant steel, there is a fair trade being done, with no change whatever. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

Canada Plates—These are more active, and numerous orders have been re-

ceived, especially for later shipment. Quotations are still subject to concession. We quote the following: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized, \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

Black Sheets—A brisk demand continues for black sheets, but the prices quoted are subject to concession. We quote the following: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

Galvanized Iron—A good many orders for galvanized iron were received this week, the majority of these being for Fall shipment. The following prices are quoted: Queen's Head, 28 gauge, \$4.30; 26 gauge, \$4.05; 22 to 24 gauge, \$3.80; 16 to 20 gauge, \$3.70; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals' "Best Best," 28 gauge, \$4.30. "Windmill Best," 28 gauge, \$4. In less than case lots, 25c extra.

Sheet Zinc—Sheet zinc is somewhat weaker at present, and the price has been lowered slightly. We quote: case lots at \$6.25 to \$6.50, and small quantities \$6.50 to \$6.75.

Tin Plates—There is no change. Cokes, \$3.75, and charcoal, \$4.00.

Ingot Tin—Tin was firmer during the week, but closed again at last week's quotations. Concessions are no longer obtainable, and the demand is fairly good. Quotations are 30c to 30 1-2c.

Ingot Copper—The advance in copper noted last week, of one quarter cent per pound, still holds. There is a local scarcity of copper at the present time. Quotations are 13 1-2 to 13 3-4c, the former price being for quantities only, and is firmly held at that.

Pig Lead—Pig lead continues firm with no change, quoted at \$3.25 to \$3.35.

Coil Chain—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on carlots.

Scrap Metal and Old Material—There is no change in the scrap metal market this week. There seems to be

little stock moving, and the market is almost at a standstill. We quote as follows: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

ONTARIO MARKETS.

Office of HARDWARE AND METAL,
10 Front Street East,
Toronto, Aug. 5, 1904.

CONDITIONS are almost identically the same as reported last week.

This is holiday season and holiday conditions are prevailing. However, this year trade is somewhat brighter than usual at this season. The only item of importance this week is the reduction on the price of wire nails by wholesale dealers. This has been pending for two weeks back. No reduction has been made by manufacturers. The reduction amounts to 15c per keg. There is a good demand for sporting goods already. Many orders are being placed for future delivery. The demand for lawn mowers, screen doors, screen wire cloth and spring hinges is now over, and we no longer quote them. Woodenware holds firm at reduced prices.

Harvest Tools—There is a steady demand for this line.

Sporting Goods—Retailers are already placing orders for future delivery, and the demand is being felt to a very considerable extent.

Washing Machines—Demand is very good this week. We quote: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

Woodenware—This week are quoted the reduced prices as noted last week. A fair trade is being done. Reduced quotations are as follows: Tubs, No. 0, \$11.25; No. 1, \$9.00; No. 2, \$8.00; No. 3, \$7.00; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2.00; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

Steel Track Door Hangers—There is little change in the situation. Business is very fair for this season.

Chain—The demand is fair. Prices are quoted as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

Step Ladders—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

Barb Wire—A very fair trade has been done during the past week, although the demand is lessening each week. We quote as follows: \$2.75 per 100 lbs. f. o. b. Toronto and \$2.50 f. o. b. Cleveland. Carlots of 15 tons, \$2.40 f. o. b. Cleveland.

Galvanized Wire—A fair trade continues at unchanged prices. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 12, \$2.60; No. 13, \$2.70; land, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs. extra charged.

Coiled Spring Wire—Sorting orders are coming in from day to day. Prices are steady. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

Wire Nails—Wholesale houses have made a reduction in wire nails of 15c per keg. No reduction has been made by manufacturers. Quotations now are \$2.30 per keg f. o. b. Toronto.

Horseshoes—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

Horsenails—Business can be said to be very good in this line. Prices are unchanged as follows: "C" brand, 40, 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

Screws—A steady active demand continues. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.;

PORTLAND CEMENT

CANADIAN, ENGLISH,
GERMAN and BELGIAN.
FIRE BRICKS, FIRE CLAY,
ENAMELLED BRICKS, all colors.
BUILDING BRICKS.
SEWER PIPES, CULVERT PIPES,
WHEELBARROWS,
FOUNDERS' and CON-
TRACTORS' SUPPLIES.

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WELLINGTON ST., MONTREAL

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Manufacturers of

CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

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Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

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BAR IRON, PIG IRON GALVANIZED IRON,
CANADA PLATES, TINPLATES, WIRE ROPE
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ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,
and LIVERPOOL, ENGLAND.

round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

Rivets and Burrs—A steady and brisk demand continues. Prices remain unchanged. We quote: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

Bolts and Nuts—A very fair demand is reported by all dealers. Prices are steady. We now quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

Cordage—Prices remain at last week's quotations. The demand is reported to be quite active. However, the season for binder twine is drawing to a close. We quote the following prices: Sisal, 10 1-4c; standard, 10 1-4c; standard manila (550 ft.), 11 1-4c; manila (600 ft.), 12 1-4c; pure manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are as follows: Pure manila, 14 1-2c; British pure manila, 11 1-2; sisal, 11 double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sash cord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5-32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 24c; 4 ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

Building Paper—The demand for building paper continues about the same. Prices are unchanged and trade is brisk. Quotations are as follows: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

Fire Brick—The demand for fire brick is not quite so brisk this week. This is accounted for by the season. Prices

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Close prices to wholesale buyers only.

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"ALPHA"

HIGH SPEED STEEL

Crucible Cast Steel
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B. K. MORTON & CO.

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E. G. PRIOR & CO., Limited, Victoria.

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D. W. CLARK, P.O. Box 520, Toronto

NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL

are unchanged. Quotations are as follows: English and Scotch firebrick, 30 to 35c American, low grade, 22 to 27c; high grade, 32 1-2 to 40c.

Cement—The demand still continues to increase. Prices remain the same. The outlook is for a strong demand until the end of the season. Quotations are as follows: Canadian Portland, \$1.80 to \$2.10; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2; ex-store; American Portland \$2.30 to \$2.40 f. o. b. Toronto.

METALS.

Business is quiet on the metal market this week. Indeed it is almost featureless. Outside markets, however, continue to show considerable strength. This holiday season has its effect on the metal market as well as on others. Many buyers are away on their vacations, and consequently not much business is being done. The outlook for the future is bright, although depending to a large extent on the crop in Ontario and Manitoba. Quotations remain unchanged since last week.

Pig Iron—Prices remain unchanged. Pig iron is being bought in small quantities, buyers evidently still a little afraid of the market. However it is thought that prices have now reached bottom level. Quotations are as follows:

Middleboro, f.o.b. Toronto.....	\$18 75
Hamilton, No. 1	\$17 50 to 16 75
" No. 2	17 00 to 17 25
" No. 1, Hamilton	16 75 to 16 50
Midland, No. 1	17 50 to 17 75
" No. 2	17 00 to 17 25
" No. 1 f.o.b. Midland.....	16 00 to 16 50
Radnor, f.o.b. furnaces.....	27 00
Londonderry, f.o.b. furnaces.....	16 50 to 17 00

Bar Iron—A good business is being done, and prices are firmly maintained. We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

Steel—A very good demand is reported, and prices are steady. Quotations as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

Tin—Prices remain unchanged at last week's quotations, which are from 30c to 31c.

Galvanized Sheets—There is a very

sound demand. Margin is very close. Quotations are as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

Tin Plates—There is a very good demand, with prices unchanged. Stocks are light. We quote the following: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

Canada Plates—The improved demand noted last week continues. Prices remain steady. We quote: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

Copper—Market is active this week;

outside markets are firm. Prices are unchanged, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

Brass—Conditions are unchanged. There is a fair demand, with discount steady at 15 per cent.

Lead—There is a good demand with prices very firm. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

Zinc Spelter—There is a stronger demand. Buying is active at 5 3-4 to 6c per lb.

Solder—There is a fair trade. Prices are 1-2c lower. We quote: Guaranteed

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Are known all over the World.

WARRANTED.

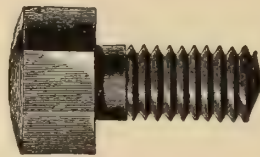
QUICK CUTTING. LONG WEARING.

SIX FACTORIES PRODUCING DAILY 120,000.

Sold by all prominent merchants throughout the Dominion.

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half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

Antimony—Market is quiet. Quotations are: 7 1-2 to 8c per lb.

Old Material—The market for brass and iron is quite dull this week. Heavy yellow brass is quoted 1-2c lower. Otherwise prices remain unchanged. Quotations are: Heavy copper and wire 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 9 1-4c per lb.; heavy yellow brass, 7 to 8c per lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.30 to \$2.45 per cwt.; scrap zinc, 3 1-4 to 2c per lb.; iron, No. 1 wrought, \$8 to \$9; No. 2 wrought, \$2; machinery cast scrap, \$11; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 4 to 4 1-2c per lb.; country mixed rags, 70c per 100 lbs.

Petroleum—Trade is brisk this week. Prices are unchanged. Our quotations are: Canadian water white, 18c; Canadian prime white, 16 1-2c; American water white, 19c. ex-warehouse.

Hides, Tallow, Skins and Wool.

The hide market is very firm and receipts are small. Receipts of wool are also small as dealers in the country are holding off for higher prices. Whether or not they will secure prices asked is doubtful. In the meantime business is practically at a standstill. We quote:

Hides, Tallow, Skins and Wool.

HIDES

No. 1 green, per lb.	0 08
" 2 " " "	0 07
" 1 " steers, per lb.	0 08 1/2
" 2 " " "	0 07 1/2
Cured, per lb.	0 08 1/2

CALFSKINS.

Veal skins, No. 1, 6 to 15 lb. inclusive	0 10
" " " 15 to 20 lb	0 08
" " " 20 to 25 lb	0 09
" " " 25 to 30 lb	0 07
Deacons (dairies), each	0 65
Sheep skins	1 25
Lamb skins	0 50
Shearlings	0 45

TALLOW.

Rendered Tallow, per lb.	0 04	0 04 1/2
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WOOL.

Unwashed wool, per lb.	0 11 1/2	0 13
Fleece wool, new clip, per lb.	0 19	0 20
Pulled wools, super, per lb.	0 19	0 21
" " extra	0 21	0 23

TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence to **HARDWARE AND METAL.**

Vancouver, B. C., July 29, 1904.

TRADE between this port and Australia gives evidence of looking up to an appreciable extent in the near future. Steamers departing for the land of the Southern Cross take out a full cargo, that of the Aorangi, the last to leave, being composed of dry goods, boots, flour, and a large quantity of agricultural implements from the

Massey-Harris Co. of Toronto. Coming back there is not so much, but an attempt is to be made to increase cargoes from Australia. A good wine is produced in that country, and an exhibition of it will be on view at the Toronto Fair this year. This exhibit is made in the hope of securing some of the trade of Canada, and, as the product is said to compare very favorably with that now in favor, there is no reason why importations should not be made. The salt trade of this province is quite a considerable item, and Australia will ship a couple of hundred tons to Vancouver as a first shipment. Already considerable hemp is brought over, which after being converted into twine is very often sent back for use in the harvest fields.

* * *

Machinery for use in the north is shipped in large quantities from here north. One of the latest orders is that of a large Bucyrus dredge, which is to be installed in Atlin, by the Western Engineering & Construction Co., of San Francisco. The dredge will cost about \$200,000, and will be built on the coast, and shipped north, where it will be put together.

The Detroit-Yukon Mining Co., which owns large properties in the vicinity of Dawson, have imported four locomotives and a number of cars. Their mines are on Bear Creek, but water is scarce, and the pay dirt will be hauled to the Klondike River, twenty cars being used in the process. The cars are of heavy iron, ten and twelve feet long, and are loaded with steam shovels. The engines are the small dummy type, manufactured by Porter & Co., of Pittsburg, and the outfit cost in the neighborhood of \$100,000.

* * *

Trade with Dawson from eastern Canada, it is expected, will show considerable of a decline when the season's reports are made out. Last year about 36,000 tons were shipped north, the consignments being general merchandise such as machinery, etc., and the staples which did not require haste in transportation. This year it will amount only to about 20,000. There has been a good deal of disappointment over the fact that the special commodity rates inaugurated by the White Pass & Yukon Railway, and put in force on July 1st, did not bring the increase in trade that was expected. On August 15th the class rates, considerably higher, will go into effect again, and continue until the close of navigation. The trade from Vancouver shows little decline, so the difference must be in the business done



For either new or old Buildings
OUR
Metallic Cornices
can't be equalled for practical service and artistic beauty.

They are light in weight, easily handled and economical in cost—giving fire-proof protection as well as a handsome effect.

Almost countless stock designs—or any particular size, shape or pattern to order. Write for full details.

METALLIC ROOFING CO., LIMITED
Wholesale Mfrs.
TORONTO, CANADA.

with the eastern houses, the goods from which are shipped through this port.

The development of coal deposits in the Bulkley Valley country by a Toronto syndicate, is an indication of the gradual growth of activity in those regions which expect transportation facilities from the building of the new railway across the continent. This company is represented by Lyman, Davidson & Co., and a good deal of work has been done. Some large coal veins are showing up, one of them reported to be 24 feet wide, while several others run from three to four feet. Twenty or thirty other claims in the same district have been staked out for one of the railway companies, and Mr. Webster, of Ottawa, has been there taking up land. Mr. Leech, of the Crow's Nest Pass Coal Co., is now in the district on a prospecting tour, and will remain all Summer.

* * *

The manufacture of cement stone for building purposes may possibly be started in Victoria. Mr. G. L. Brown, of Bellingham, agent for Fisher's hydraulic stone system, of Memphis, is looking over the possibilities at present. It may be that the Saanich cement will be utilized, which would result in a substantial reduction in the cost.

An eastern Ontario syndicate, headed by Mr. Cook, who has large mills near Algoma, is being talked of as about to establish a new saw mill industry in the southern interior of the province.

Conditions in the local hardware mar-

ket are normal, with no change in prices.

Mr. S. H. Miner and A. C. Flumerfelt, of the Granby Mining Co., are in the city this week, but have little to say about their operations.

McIntyre's logging camp at Topaz Harbor is the last to close down because of the poor conditions in the lumber industry.

The new marine railway, under construction by the Victoria Machinery Depot, will be ready for business about the 1st of October. It will accommodate vessels of 3,000 tons.

The \$12,000 steam auxiliary yacht, being built for Mr. A. McLaren, the millionaire lumberman of Ottawa, will be launched tomorrow. When completed she will be a model of the wood worker's and iron worker's arts.

It is reported that the Columbia Flour Mills Co. will remove its plant from Enderby, B. C., to Lethbridge, Alta.

The Armstrong Farmers' Exchange shipped their first cargo of potatoes from Kelowna last week. They have organized to find a market for their produce.

PITTSBURG METAL MARKETS.

From the Iron Trade Review, Aug. 4, 1904

THE Wheeling Mold & Foundry Co. placed a contract with one of the Valley furnaces late last week for 25,000 tons of Bessemer iron, with the option of taking foundry, at a price said to net the furnace about \$11.60 per ton. The iron is to be used in the manufacture of castings for a part of the New York tunnel. While the delivery of the castings extends over a period of sixteen months, the pig iron will all be produced within the next six months and will be piled in the furnace yard for shipment to the foundry as required. This scheme of stocking the iron brought out the low prices named, as furnace operators were willing to accept lower prices on the contract for deliveries that could be completed in six or seven months than if extended over a period of more than a year. Shipments on one large contract for Bessemer iron to go to a leading independent steel interest have also been ordered resumed and will not terminate until July 1, 1905. This contract was placed nearly six months ago, but owing to the falling off in demand deliveries were held up. During the eleven months that one Valley furnace will operate on this order about 80,000 tons will be delivered. These two orders take one furnace out of the mar-

ket practically for a year while another is sold up until well after February. The pig iron market has been greatly strengthened in consequence, advances ranging from 25 to 35 cents per ton having been made by most of the furnace operators. Sales of Bessemer iron for delivery over the last four months of the year have been made at \$12.25 and \$12.50, Valley furnace, while for prompt shipment, it is doubtful if \$12.25 could be secured to any extent.

Contracts for the coke to be used in the manufacture of the Bessemer iron referred to above were also closed in the week, amounting to over 100,000 tons. The coke to be used on the contract that extends up to next July was placed at a price slightly below \$1.50 at the ovens while that for the other contract was secured at a considerably lower price. Furthermore the iron for another portion of the tunnel castings may be placed at any time, and it is probable that the same arrangement made by the Wheeling Mold & Foundry Co. will obtain in this order. It is believed that the iron will be produced in the Buffalo district.

Pig iron.—As soon as it was announced that the contract for 25,000 tons of iron for the Wheeling Mold & Foundry Co. had been placed, Valley furnace operators advanced asking prices on all grades of iron. For Bessemer iron 25 to 35 cents a ton more is asked, while \$11.50 foundry iron has disappeared from the market entirely. The announcement that shipments have been resumed on a large order for Bessemer iron, closed early this year and which will not conclude until July 1, next year, caused a further stiffening and several operators refuse to consider the delivery of iron after October. We note the sale of 1,200 tons of Bessemer iron for delivery the last four months at \$12.35, Valley furnace, and the sale of 4,000 tons, same delivery, at \$12.25. No. 2 foundry is held by some furnaces at \$12.50 Pittsburgh, for early delivery, while others refuse to quote below \$12.85. On forge iron nothing lower than \$12 Pittsburgh, can be done. Three idle stacks in the Valleys have resumed and one at McKeesport. The Hannah furnace of the Republic Iron & Steel Co. at Youngstown is also to go in at an early date. Southern iron is entirely out of this market at present prices. While \$9.25 can be done on No. 2 foundry Birmingham, the majority of the

furnaces are asking \$9.50, which makes the Pittsburgh delivered price \$1 per ton above Northern iron. We revise quotations as follows:

Bessemer, Valley	\$12 00 to \$12 25
Bessemer, Pittsburg.....	12 95 to 13 10
No. 1 Foundry.....	13 00 to 13 25
No. 2 Foundry	12 60 to 12 85
Gray forge, Pittsburg	12 00 to 12 15
Chilled basic, Valley	11 75 to 11 95
Chilled basic, Pittsburg.....	12 60 to 12 75

Steel.—One of the leading independent interests is in the market for about 60,000 tons of steel for delivery during the next year. Efforts are being made to secure the material on a conversion basis, but as yet the contract has not been let. While pool quotations are being more rigidly adhered to than for some time, it is because the business offered is not sufficient to warrant concessions. It is expected that this order will be placed much below the agreed prices, and that not more than \$19 per ton will be paid. The open-hearth plant of the LaBelle Iron Works, Steubenville, is off this week and will continue idle the greater part of the month. The Ohio works of the Carnegie Steel Co. have resumed, but otherwise there has been no change in steel works operations. Agreed quotations are as follows: Bessemer and open-hearth billets, 4 by 4 inches, and slabs up to and including 0.25 carbon, \$23 Pittsburgh, Wheeling, Valley, Johnstown, Ashland, Ky., Iron-ton, O., and Lorain, O., 0.26 and including 0.60 carbon, \$1 advance; and 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 3-7-8 inches and sheets and tin bars are \$1 per ton extra. Bessemer and open-hearth rods are quoted at \$28 to \$28.50 Pittsburgh.

Plates.—The plate market shows no improvement and mills continue to operate at only a limited capacity. We make the following quotations: Tank plates, 1-4 inch thick and up to 100 inches in width, 1.60c at mill Pittsburgh; flange and boiler steel, 1.70c marine, ordinary firebox, A. B. M. A. specifications, 1.80c; still bottom steel 1.85c; locomotive firebox, not less than 2.10c; and it ranges in price to 3c. Plates, more than 10 inches, 5c extra 100 pounds. Plates 3-16 inch in thickness, \$2 extra; gauges Nos. 7 and 8, \$3 extra. These quotations are based on carload lots, with 5c extra a hundred pounds for less than carload lots. Terms, net cash in 30 days.

Bars.—Demand for both iron and steel bars continues light. Agricultural implement manufacturers are in no hurry

to cover for future requirements and no activity in this market is looked for until the latter part of next month. We make the following quotations: Bar iron, 1.25c to 1.30c Pittsburg (this price for local delivery). Hoops are held at 1.55c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open-hearth, 1.40c; plow beams and cultivator beams, 1.35c net; channels, angles, zees and tees, Bessemer, under 3 inches 1.45c. The following differentials are maintained on steel: Less than 2,000 pounds of a size, not less than 1,000 pounds, 10 cents advance; less than 1,000 pounds of a size, 30 cents advance.

Sheets.—The demand for sheets has improved to some extent, but is not sufficient to warrant the quoting of any higher prices than have been ruling. Lower than 2.10c for 28-gauge black sheets has not been named by any of the mills up to date. We make the following quotations on black sheets, one pass through cold rolls: No. 8, 1.60c; No. 9, 1.65c; Nos. 12 and 14, 1.70c; Nos. 15-17, 1.75c to 1.80c; Nos. 18-21, 1.85c to 1.90c; Nos. 22-24, 1.95c; Nos. 25-26, 2c; No. 27, 2.05c; No. 28, 2.10c to 2.15c; No. 29, 2.35c to 2.40c; No. 30, 2.50c to 2.55c. Galvanized: Nos. 12-17, 2.20c to 2.25c; Nos. 18-21, 2.35c to 2.40c; Nos. 22 to 24, 2.50c to 2.55c; Nos. 25-26, 2.65c to 2.70c; No. 27, 2.90c; No. 28, 3.10c; No. 29, 3.45c to 3.50c; No. 30, 3.85c to 3.90c.

Tin Plate.—Demand for tin plate at present is seasonably light, and the reduction announced last week is for the purpose of stimulating demand. We quote 100-pound boxes of coke plates at \$3.30 f. o. b. nearest mill, Pittsburg district. Two per cent off for cash in ten days.

Wire and Wire Nails.—The wire mills of the largest producer did not start up this week as anticipated, and no date has been named for general resumption. Concessions continue to be named on the limited tonnage that is offered. We make the following quotations: Wire nails, carload lots to jobbers f. o. b. cars Pittsburg, are quoted \$1.90 base; plain wire, carload lots, \$1.80 base; barb wire, carload lots, \$2.20 base; staples, carload lots, \$2.05 keg. Galvanized, 30 cents extra. Carload lots to retailers are held at 5 cents advance in all lines, and on less than carload lots a further advance of 10 cents is charged. Steel and iron cut nails, carload lots, \$1.75, and less than carload lots, \$1.80 f. o. b. Pittsburg,

plus freight to point of destination. Terms, 60 days, less 2 per cent off in 10 days.

Merchant Steel.—At the recent meeting of the shafting manufacturers an extra discount of 5 per cent was made on material for shipment to the Pacific coast. Carload lots for this delivery are held at 52 and 5 off. No change was made in the quotations applying to the other sections of the country. We quote as follows: Toe calk, 1.90c; carriage spring steel, 1.75c; tire steel, 1.55c to 1.60c; plow steel, 6 inches and under, 1.35c for Bessemer and open-hearth; plow slabs, 3-4 inch and heavier, 1.60c. The demand for shafting on the part of the machinery manufacturers is not heavy, and tonnage has therefore been considerably affected. Drawn and cold rolled shafting is held at 52 per cent off in carload lots and 47 off in less than carload lots.

Old Material.—Quotations on all grades of old material are higher, and as most of the available material is in the hands of the dealers at present, it is doubtful if the recent low prices will be duplicated soon. Our quotations for gross tons are as follows: Heavy melting stock, \$11 to \$11.25; cast iron borings, \$5 to \$5.50; busheling scrap, \$8.75 to \$9; No. 1 wrought, \$11 to \$11.50.

Coke.—While there are reports of higher prices on coke, actual business continues to be done at prices somewhat lower than have been prevailing. One furnace in the Youngstown district closed for its requirements of Connellsville coke for the last half at a slightly lower price than \$1.35. Another contract for furnace coke for delivery to July 1 next year was placed at a little better than \$1.50, a low price when deliveries are considered. Many of the operators refuse to sell their furnace coke below \$1.40, while others are asking \$1.45 for delivery the remainder of the year. On foundry coke \$1.80 is the minimum for strictly high-grade Connellsville product, and a few operators are securing \$2 and over.

BUILDING UP A HARDWARE BUSINESS.

By J. B. Avara.

AS to how to build up a retail hardware business, I should say at all times buy dependable and desirable goods and don't switch off after trashy stuff simply because the price is

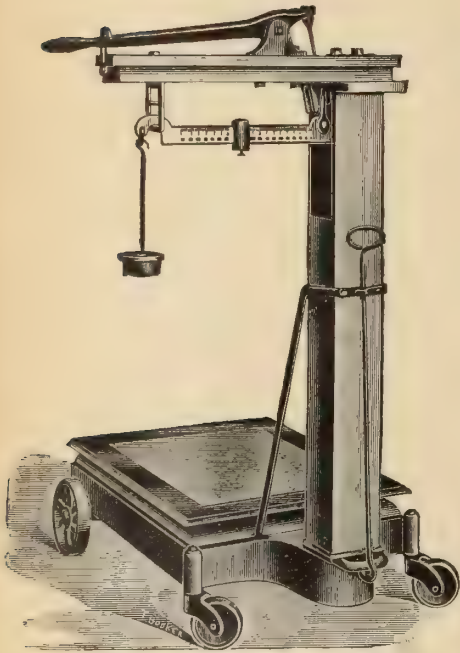
low, but keep quality to the front at all times. It may be and is necessary in most stores to keep a certain amount of low-priced goods to meet possible competition, and also to aid in selling the better goods by comparison. My experience is that if two articles are placed before a customer, one of the so-called cheap kind and the other a good one at the right price, nine times in ten the better article will be sold.

The next thing in building up a hardware business, and I consider a most important factor, is to properly arrange your goods for ease in handling and display them well. Keep the whole stock on dress parade as near as possible at all times. The old saying that "goods well bought are half sold" should be changed to read that "goods well displayed sell themselves." Fix a place for everything and have everything kept in its place.

Don't be afraid to spend money, a little of it will do a whole lot if necessary in fixing up your store. Make it attractive to your customers, and it will have more attraction for you and your clerks will take a greater interest in the business. Study the needs of each line of goods for displaying and ease in handling. Frequent changes, if only minor ones, in and about your store will help to create the interest of the buying public in you and your business. Hardware dealers, as a rule, are not supposed to have a great deal of pride in their make up, but it does one good to have a customer come in and say: "Hello! you've fixed things, haven't you?" Your store looks better. Right then you know the change has made a good impression and good impressions mean more business every time.

Keep posted on the lines of goods your competitor handles, not for the purpose of talking his goods down, but by knowing his goods as well as your own you will be better able to talk your goods up. His goods or implements may be just as good, sometimes better than those you handle, but if you are posted well enough to show all the good points of your article your customer will most likely infer that your article must be better. You know all about all of them and when you show a customer that you know more about the goods he wants than he knows himself, he is very likely to take your word for the balance and make the purchase.

The Burrow, Stewart & Milne Co.'s "Champion Jewel" Scales



FITTED WITH SWIVEL CASTERS.

Can be turned without lifting in their own length, even when heavily weighted.

Far Superior to any Truck or Wagon scale (the weighing results of some of which are little better than a guess).

Thoroughly reliable and accurate.

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MERRICK, ANDERSON & CO.

NORTHWEST DISTRIBUTORS,
WINNIPEG.

HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL
Room 308 McIntyre Block,
Winnipeg, Aug. 1, 1904.

THE great Dominion Fair is now in full swing and although there was some little delay in getting ready some exhibits on account of the great rush in the handling of freight, this matter was soon remedied and everything is now complete. The entire exhibition is meeting with the full appreciation of the many thousands of visitors that enter the grounds each day. Business is brisk and the markets are steady with little or no change of any note. We quote:

Barbed wire, 100 lb.....	\$3 15
Plain galvanized.....6 to 8	3 39
Plain galvanized.....9	2 50
Plain galvanized.....10	3 50
".....12	3 10
".....13	3 20
".....14	3 90
".....15	4 45
".....16	4 60
Plain twist.....	3 15
Staples.....	3 65
Oiled annealed wire.....10	3 42
".....11	3 48
".....12	3 56
".....13	3 66
".....14	3 76
".....15	3 91
Annealed wires (uncoiled) 10c. less.	
Horseshoes, iron, No. 0 to No. 1.....	\$4 75
No. 2 and larger.....	4 45
Snow shoes, No. 0 to No. 1.....	4 60
No. 2 and larger.....	4 45
Steel, No. 0 to No. 1.....	4 45
No. 2 and larger.....	4 20
Horsenails, No. 4—1½ in., list price.....	0 48
" " 5—2 " ".....	0 32
" " 6—2½ " ".....	0 28
" " 7—2¼ " ".....	0 24
" " 8—2½/8 " ".....	0 22
" " 9—2½ " ".....	0 20
" " 10—2½ " ".....	0 20
" " 11—2½ " ".....	0 20
" " 12—2½ " ".....	0 20
" " 14—3½ " ".....	0 20
Discount on these prices 40, 10, 7½ per cent., plus 15c. per box.	

Cut Nails—	Wire Nails—
2d 1 in.....\$4 10	1 in.....4 15
3d Fin. 1½ in.....4 10	1½ in.....4 10
3d 1½ in.....3 75	1¾ ".....3 70
4d 1½ in.....3 50	1½ ".....3 50
5d 1½ in.....3 50	1¾ ".....3 50
6d 2 in.....3 40	2 ".....3 40
8d 2½ in.....3 25	2½ ".....3 25
10d 3 in.....3 20	3 ".....3 20
20d 4 in.....3 15	3½ ".....3 15
30d 4½ in.....3 10	4 ".....3 10
40d 5 in.....3 10	4½ ".....3 10
50d 5½ in.....3 10	5 ".....3 10
60d 6 in.....3 10	5½ ".....3 10
	6 ".....3 10

Bar iron (basis).....	2 50
Swedish iron (basis).....	4 75
Sleigh shoe steel.....	2 85
Spring steel.....	3 25
Machinery steel.....	3 50
Tool steel, Black Diamond, 100 lb.....	8 50
Jessop.....	13 00
Sheet iron, black, 10 to 16 gauge, 100 lb.	3 50
18 to 22 gauge.....	3 75
24 gauge.....	3 90
26 gauge.....	4 00
gauge.....	4 10
Galvanized Iron, Apollo, 16 gauge.....	4 00
18 and 20 gauge.....	4 00
22 and 24 gauge.....	4 25
26 gauge English or 28 American..	4 25
28 gauge.....	4 50
30 gauge or 10¼ oz.....	4 75
Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.	

Queen's Head, 24 gauge.....	4 25
26 gauge.....	4 50
28 ".....	4 75
Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb.	
Genuine Russian, per lb.....	11
imitation ".....07	10 08
Tinned, 24 gauge, 100 lb.....	8 00
26 gauge.....	8 05
Finplate, 1C charcoal, 20 x 28, box.....	9 50
" IX.....	11 50
" IXX.....	13 50
Ingot tin.....	35
Canada plate, 18 x 21, 18 x 24 and 20 x 28.	3 05
Canada plate, full polished.....	3 75
Sheet zinc, cask lots, 100 lb.....	7 00
Broken lots.....	7 50
Pig lead, 100 lb.....	5 50
Black iron pipe, ¼ inch.....	
" ½ ".....	
" ¾ ".....	2 80
" 1 ".....	3 25
Black iron pipe, ¾ inch.....	4 20
" 1 ".....	5 85
" 1½ ".....	8 20
" 1¾ ".....	10 00
" 2 ".....	14 00
Rope, sisal, 7-16 and larger, basis.....	
Manila, 7-16 and larger, basis.....	15 25
Lathyrum.....	11 25
Solder.....	20
Axes, chopping.....\$ 6 75 to 12 00	
" double bitts.....12 00 to 18 00	
Bluestone.....	5 25
Screws, flat head, iron, bright.....85 and 10 p.c.	
Round " ".....80 p.c.	
Flat " brass.....75 and 10 p.c.	
Round " ".....70 and 10 p.c.	
Coach.....70 p.c.	
Bolts, carriage, ¾ or smaller.....60 and 5 p.c.	
" 7-16 and up.....55 p.c.	
Bolts, machine, ¾ and under.....55 and 5 p.c.	
" 7-16 and over.....55 p.c.	
Bolts, tire.....60 and 5 p.c.	
Bolt ends.....55 and 5 p.c.	
Sleigh shoe bolts.....70 p.c.	
Machine screws.....70 p.c.	
Plough bolts.....55 and 5 p.c.	
Square nuts, case lots.....3c. discount.	
" small lots.....2½ c.	
Hex " case lots.....3c.	
" " smaller lots.....2½ c.	
Rivets, iron.....50 and 10 p.c.	
Copper, No. 8.....32	
" No. 12.....36	
Coil chain, 3-16 inch.....9½	
" ¼ inch.....7½	
" 5-16 inch.....5½	
" ¾ inch.....5½	
" 7-16 inch.....4½	
" ¾ inch.....4½	
" ¾ and ¾ inch.....4	
Spades and shovels.....40 and 5 p.c.	
Harvest tools.....60 p.c.	
Axe handles, turned, s.g. hickory, doz.....\$3 15	
No. 1.....1 90	
No. 2.....1 60	
Octagon extra.....2 30	
No. 1.....1 60	
Files common.....70 and 10 p.c.	
Diamond.....60 p.c.	
Building paper:	
Anchor, plain.....65c.	
" tarred.....70c.	
Pure fibre, plain.....67½ c.	
" tarred.....80c.	
Ammunition, cartridges, Dominion R.F.	50 p.c.
Dominion, C.F., pistol.....30 p.c.	
" military.....15 p.c.	
American R.F.....30 p.c.	
C.F. pistol.....5 p.c.	
C.F. military.....10 p.c. advance.	
Loaded shells:	
Eley's soft, 12 gauge black.....15 00	
chilled, 12 gauge.....16 00	
soft, 10 gauge.....18 00	
chilled, 10 gauge.....19 00	
Shot, Ordinary, per 100 lb.....6 00	
Chilled.....6 55	

Powder, F.F., keg	4 70
F.F.G.	5 00
Tinware, pressed, retinned.	70 and 10 p.c.
" " plain	75 and 2½ p.c.
" " pieced.	
Japanned ware	37½ p.c.
Enamelled ware, white.	45 p.c.
" " Famous.	50 and 10 p.c.
" " Imperial.	50 and 10 p.c.
Green Wire Cloth	1 55

PETROLEUM.

Water white American	27¾c.
Prime white American.	25¾c.
Water white Canadian.	25¾c.
Prime white Canadian.	24¾c.

SCRAP.

No. 1 cast iron	\$14 to 15
No. 2 "	7
Wrought iron scrap.	5
Copper (heavy)	8¾c. per lb.
Yellow brass (heavy)	7¾c. "
Light brass	5c. to 6c. "
Lead pipe, or tea lead.	2c. to 2¾c. "
Zinc scrap	1c. "

PAINTS, OILS AND GLASS.

White lead.	\$6 00 to \$6 50
Putty in bladder, 2¼ lb., in keg of 100 lbs.	0 02½
Turpentine, pure, in barrels.	\$ 0 87
" " Less than barrel lots.	0 02
Linseed oil, raw.	0 55
" " Boiled	0 58

WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 49, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine.	0 29
" " extra engine.	0 27
" " dynamo	0 35
" " black	0 22
" " cylinder.	\$0 50 to 0 75
" " (as to quality)	

Harness oil.	0 50 to 0 60
Neatsfoot oil	1 00
Vegetable oil, 1st pressure	1 00½
" " 2nd pressure.	1 09½

LONDON METAL MARKETS.

From The Metal Market Report August 5

Pig Iron—Scotch warrants Glasgow, closed at 51s 9d, unchanged since last issue. Middleboro No. 3 foundry closed at 42s 10 1-2d, a fall of 1 1-2d since last week.

Tin—Spit tin opened firm at £123 10s, futures, £123 15s, and after sales of 200 tons of spot and 100 tons of futures closed easy at £123 5s for spot and £123 10s for futures, making price as compared with last issue 14s 6d higher for spot and £1 7s 6d higher for futures.

Copper—Spot copper opened easy at £57, futures £57, and after sales of 50 tons of spot and 100 tons of futures, closed quiet at £57 for spot and £57 for futures, making price as compared with last week 3s 9d lower for spot and 2s 6d lower for futures.

Lead—The market closed at £11 13s 9d, making prices as compared with last week 1s 3d lower.

Spelter—The market closed at £22 2s 6d, making price as compared with last week 5s lower.

HARNESS AND SADDLERY

CONVENTION DOINGS.

THE fifth annual convention of the Dominion of Canada Harness Association was held in Toronto on July 26, 27 and 28. The convention was held in the Confederation Life Building. There were about 90 members attended the convention. President Charles Kelley, Uxbridge, occupied the chair.

The election of officers resulted as follows:

Past President, Charles Kelley, Uxbridge, Ont.

President, C. H. Nix, Uxbridge.

First Vice-President, J. B. Moat, Toronto.

Second Vice-President, J. H. T. Low, Toronto.

Treasurer, J. W. Woolnough, Toronto.

Secretary, Alex. Downey, Toronto.

TERRITORIAL VICE-PRESIDENTS.

Windsor, Mr. Watson.

Listowel, Mr. Preuter.

Berlin, J. H. Farenback.

Dundalk, Chas. Higgins.

Sarnia, M. Broderick.

Sterling, J. H. McKee.

Ottawa, R. Craig.

Renfrew, R. McEwen.

The question of having a closer affiliation between the wholesalers and retailers was discussed at length. It was decided that wholesalers should be allowed to become members of the association on the same conditions that retailers are.

It was also decided to change the membership fee from \$2 per annum to \$1.

On the second day of the convention the Knights of the Awl, Needle and Wax-end, enjoyed themselves on an excursion to Niagara Falls by way of the Toronto, St. Catharines and Niagara route. A large number of the members and their friends took advantage of the excursion, and despite the wet weather it was a complete success.

A very pleasant feature of the event was the presentation to the past president, Chas. Kelley, of a gold headed umbrella. The presentation was made by W. J. Parsons. Mr. Kelley was very much overcome by the honor shown him by his fellow craftsmen, but recovering himself he made a suitable reply in his usual happy strain.

The convention will again be held in Toronto next year, at a date to be fixed by the executive.

NOTES.

A tour of the harness and saddlery houses in Toronto reveals the pleasing fact that business is good, and prospects for the Fall trade of the best. Dealers in London also are experiencing a steady demand.

* * *

The new factory at Oshawa of the Canada Saddlery & Harness Mfg. Co. is now nearing completion, and the company expect to be ready for business about August 20. The new business will be managed by Mr. W. T. Woodbridge, of Toronto. W. D. Earngey is vice-president. Other directors of the company are Jas. Kenney and A. K. Butchard. The company will manufacture a full line of harness and saddlery of all kinds.

* * *

Geo. A. Rudd & Co., harness manufacturers, Toronto, intended placing an exhibit at the Winnipeg Exhibition, but upon applying for space were offered a ten foot space, which did not suit them. They will make up for their absence at Winnipeg by having a larger and finer display at Toronto Exposition than usual.

* * *

The firm name of A. L. Brown, harness manufacturer, Leamington, Ont., has been changed to the A. L. Brown Harness Co.

* * *

W. S. Morgan, manufacturer of harness pads, Hamilton, Ont., has sold out his business to the Canadian Carpet Co., Milton, Ont.

* * *

E. Bowers, harness maker, Carievale, N. W. T., has been succeeded by F. Clack.

INKLETS.

Selling goods is not the only purpose of advertising. The secondary purpose of publicity is the building up of prestige.

A good many have yet to learn that anything that improves the appearance of a store, shop, or factory, is good advertising.

A good price is a guarantee of value. If one advertises himself as a cheap John, he and his goods will be taken as cheap and shoddy.

PAINT, OIL AND BRUSH TRADES

What is Glue?*

IN the work of the glue boiler there is little poetry or romance, and very much of plain matter-of-fact. It is a process interesting and instructive, a work calling for much scientific skill and mathematical accuracy in the construction of the mechanical means employed, and in the handling of the material.

What is glue? There is scarcely a school boy or girl of the present day who could not give a correct answer to the question, and yet few people there are who know anything of the manner in which this indispensable article is produced.

Glue does not exist ready-made in nature, but is the product of the action of heat and water on nitrogenous animal tissues, the solution so obtained setting to a jelly on cooling. The result of drying the jelly is a solid, glassy-looking product, known as glue, which varies in color from light yellow to black brown.

From almost every creature belonging to the animal world can be produced a certain quantity of glutinous matter—in some cases as much as 60 to 70 per cent. Of course glue does not exist in the living organism, except under abnormal conditions, but it is the product of several transformations, the first of which takes place in the drying of the hide after the death of the animal. Consequently, many kinds of animal refuse find their way to the glue factory, and a surprisingly heterogeneous collection it is. Such things as clippings of hides, ear and tail pieces of ox, calf, and sheep, the tendons and tissues of bone, cartilages, lymphatic vessels, and swimming bladders of many fishes, rabbit skins, even scraps of parchment, and many other apparently worse than useless things, all contribute their quota, and are welcomed as so much grist to the mill by the glue boiler. To make the superior classes of glue, however, much discretion must be observed in the choice of raw materials—hide, ear, and face clippings of the ox and calf being preferred. But the age of the animals has a very important influence on the quality of the glue manufactured. While from younger animals the product is, as a rule, lighter in color and more easily obtained, it does not possess the con-

sistency and strength of the substance yielded by animals of maturer age.

These are the main constituents employed in the manufacture of glue, and by a careful mixing of them with the addition of several of the glue-yielding substances previously mentioned, fine products are manufactured.

PREPARATORY PROCESSES.

The fleshings are far from being ready for the kettles when sent direct from the tanneries, as they require washing, and all particles of fleshy matter must be removed. Consequently, all the material has to be thoroughly treated at the glue works before the actual manufacturing process begins. For this purpose every up-to-date glue works is supplied with large open-air pits built into the ground about four-and-a-half feet deep. In these the "stock," as it is technically termed, is steeped from two to thirteen weeks in "Milk-o'-Lime" and water, which dissolves any adhering fleshy matter, cleans the stock thoroughly, and also acts as an antiseptic. During the period of steeping the stock is constantly stirred by workmen with long seven-pronged forks, to ensure that each

little piece is submitted to the action of the lime.

(Concluded in Next Issue.)

Name Omitted.

In the account of the master painters' convention, held at Montreal, that appeared in these columns last week, the name of Henderson & Potts was unintentionally omitted from the list of exhibitors of paints. This firm had an attractive exhibit that came in for considerable attention on the part of the delegates present.

Adulterated Turpentine.

The state registrar of naval stores for Georgia, U. S. A., has seized 16 casks of adulterated turpentine, says the Weekly Navy Stores Review, Savannah. In this case the adulterers have abandoned the old plan of using petroleum products in order to defraud, and instead have used wood spirits. It is rather difficult to detect the presence of wood spirits in turpentine since it is of the same specific gravity as the pine turpentine. However, inspectors claim to have a certain method of discovering the adulteration.

Refined Gas Tar,
Coal Tar,
Roofing and Paving
Pitch.



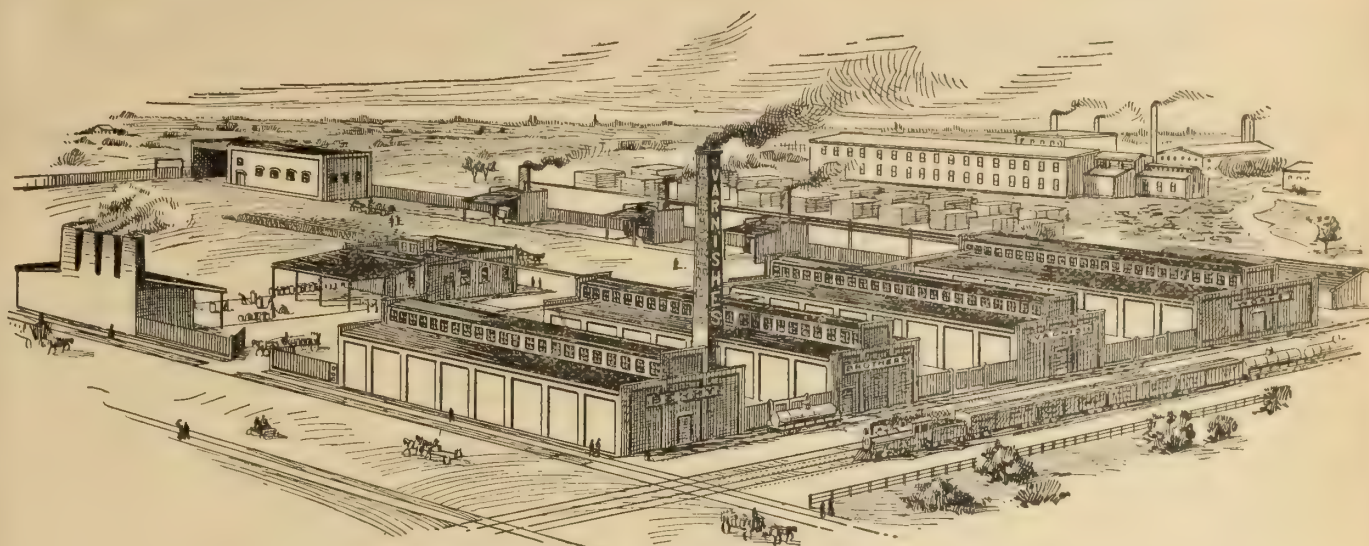
Lowest Prices.

The Imperial Varnish & Color Co.

LIMITED,

TORONTO, ONTARIO, CANADA.

* Process of manufacture as employed by J. & G. Cox, Limited, Edinburgh.



IT IS NEARLY **HALF A CENTURY**

since we commenced to make Varnish. During this period we have acquired a knowledge not only of Varnish, but of the varied needs of varnish consumers that nothing but time can impart, and have also learned how to cater successfully to every varnish want.

Our experience belongs to those who use and sell Berry Brothers' Varnishes.

Safest goods to handle, surest and most reliable goods to use.

WRITE FOR CATALOGUE.

Berry Brothers
LIMITED

WALKERVILLE, ONT.



Paint and Oil Markets

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, August 5, 1904.

ALTHOUGH the trade is now between seasons, there is still a more than average amount of business passing. Probably this is partly accounted for by the fact that the season was long in opening. Makers have some need that it hold out well, in order to recoup them for the early Spring months, during which business was below the average.

Reports indicate that industrials generally are at present large users of colors, paints and varnishes, which fact gives steadiness to the general position.

The mixed paint general trade is also satisfactory.

We quote linseed oil without change although it is below parity with English markets. This arises mainly from the fact that local stocks are heavier than usual and it is not unlikely that with the opening of the Fall demand, the price may be marked up a little.

Turpentine has advanced 1-2c, although the present is the season when it ought to be at its cheapest. It is plain that consumers of the article, because of manipulations at southern points, are forced to pay more than a fair price for this commodity.

Ground White Lead—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

Dry White Lead—\$4 in casks and in kegs \$4.25.

Dry White Zinc—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

White Zinc (ground in oil)—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

Putty—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

Orange Mineral—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

Red Lead—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

Litharge—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

Turpentine—Single barrels, 82 1-2c per gallon; two to four barrels, 81 1-2c

per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

Linseed Oil—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

Shellac Varnish—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

Mixed Paints—\$1.20 to \$1.40 per gallon.

Castor Oil—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

Canadian Paris Green—Barrels 13 1-4c; arsenic kegs 13 1-2c; 50 and 100 lb. drums, 14c; 25-lb. drums, 14 1-4c; 1 lb. packages, 15c; 1-2-lb. packages, 17c; 1 lb. tins, 16c. Terms 2 per cent., discount for cash in 30 days or 90 days net.

English Paris Green—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90

Ontario.

Office of HARDWARE AND METAL,
10 Front street east,
Toronto, August 5, 1904.

THIS market is quite active for this time of the year. There is a good demand for mixed paints, varnishes and dry colors. The demand for white lead is very good, and of course paris

green is quite active. Market quotations in all lines remain the same as last week. Turpentine is firm at the advance noted in last week's issue: Linseed oil is also steady, and the advanced quotations hold firm.

White Lead—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

Red Lead—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

White Zinc—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

Shingle Stain—In 5 gallon lots, 60 to 85c per gallon.

Paris White—90c to \$1 per 100 lb.

Whiting—60 to 65c per 100 lb.; Gilders' whiting, 75c.

Shellac—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

Linseed Oil—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

Turpentine—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

Glues—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in



"Anchor" is the Brand

Behind which we stand

In Liquid House Paints, as well as other lines of our manufacture, "Anchor Brand" means the "Best Brand" on the market. The White Lead used in Anchor Liquid Paints is BRANDRAM'S B. B. GENUINE, the world's standard for 186 years.



HENDERSON & POTTS, Limited, Mfrs., Halifax
HENDERSON & POTTS CO., Ltd., Mfrs., Montreal

If You Buy

Varnishes	Paints
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Stains	Bronzes
Fillers	Chamois
	Sponges

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LIMITED

MONTREAL

AGENTS FOR ASPINALL'S ENAMEL.



The Wearing of the Green

depends upon the kind of green used.

Wise painters, looking for brilliancy, covering power, economy and longest wear, prefer

LUCAS

Imperial French Green

Shrewd dealers always keep it in stock, knowing "the painter who knows," will come back again.

Send for particulars

JOHN LUCAS & CO.

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Paint of Quality

Don't recommend a paint to your customers unless you know that the quality of it is lasting and the color right. By selling a paint of proved merit you will secure the confidence of your trade—increase sales.

STERLING PAINTS

for outside or interior work—guaranteed right everyway. Are fast colors—do not lose lustre—defy the sun's heat—won't blister.

WRITE FOR PRICE LISTS AND CATALOGUE.

CANADIAN OIL CO'Y, Limited

Head office: Front and Scott Streets

TORONTO

CANADIAN COLORS PREFERRED.

(From The Montreal Gazette)

"Amongst a few (fortunately a very few) people in this country it is the fashion to imagine that anything which comes from abroad and has been mulcted with a duty must be better than what can be made and obtained at home. 'Search the world for brains, but, preferably, use the home product,' should be the cry for those who wish to build up the country.

"In decorating the most palatial building in Canada, and, possibly, the finest banking house in the world, viz., the new Bank of Montreal, in Montreal, no expense was spared to get the finest paints that artistic intelligence and money could procure.

"The ceiling and general 'motif' is a triumph of the decorator's art, a creamy white, light blue and dull gold, blending in a delightful phantasy of color and form.

"The paints were manufactured by the **CANADA PAINT COMPANY**, Limited, of Montreal and Toronto, and comprise their regular stock. For strength and fineness, it is emphatically asserted, there are no better colors manufactured anywhere."

bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

Putty—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

Plaster Paris—New Brunswick, \$2 per barrel.

Liquid Paints—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

Barn Paints—55 to 70c per gallon.

Bridge Paints—75c to \$1.

Castor Oil—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

English Paris Green—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

Canadian Paris Green (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

Window Glass.

MONTREAL.

The window glass trade continues good and an active business is reported. There is no change of price this week and prices remain firm at last week's quotations. We quote: First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70 seventh do., \$5.20, and eighth do., \$5.70. The discount on 50 feet is 20 per cent, and on 100 feet 33 1-3 per cent. There has been no change in prices for diamond star or double thick. First break, 50 feet, \$2.30; second do., \$2.50; first break, 100 feet, \$4.40; second do., \$4.90; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

Window Glass.

TORONTO.

The demand for glass holds very good. Prices are firm. Advance expected last week has not as yet taken place. We quote as follows: Star first break, at \$3.80 per 100 feet, and Double Diamond, first break, at \$5.06. Discount, 15 and 20 per cent.

MARITIME BOARD OF TRADE.

The annual meeting of the Maritime Board of Trade will be held at Moncton, N. B., on Wednesday, August 17th, at 10 a. m. The Moncton board are making great preparations for the meeting and reduced rates are being accorded by the transportation companies.

CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

YEARLY CONTRACT RATES.

100 words, each insertion, 1 year.....	\$30 00
" " " 6 months.....	17 00
" " " 3 months.....	10 00
50 " " " 1 year.....	17 00
25 " " " 6 months.....	10 00
" " " 1 year.....	10 00

SITUATIONS VACANT.

A TWO OR THREE good, steady men wanted for general foundry work. Apply Moffat Stove Co., Limited, Weston. f

A COMPETENT MAN to take charge of construction of granolithic walks. Apply, with references, and state wages, S. Fournier, Town Clerk, Sudbury, Ont. f

B BLACKSMITH'S helper wanted for general shop; one or two years' experience preferred; good wages to good man. Apply W. J. Batten, Port Carling, Muskoka. f

B OILERMAKERS—Four first-class men, highest wages paid. John Inglis Co., Limited. f

TWO tinsmiths wanted; state wages and experience. Box 80, Goderich. f

WANTED—At once, a tinsmith; state wages. Wm. Ough & Son, Aurora. f

WANTED—Immediately, a first class plumber, with a knowledge of steam and hot water heating, at least six months' work for the right man, Apply Purvis Bros., Sudbury. f

WANTED—Hardware traveler, a young man having five or six years experience in the retail trade preferred. Address giving references to Box 45, **HARDWARE AND METAL**, Montreal. (32)

FOR SALE.

HARDWARE STOCK—\$3,000—Not \$5 worth dead stock; for sale at 80c. on invoice; can move or continue; established and paying business in good country. Box 163, **HARDWARE AND METAL**, Toronto. (33)

BUSINESS CHANCES.

HARDWARE business wanted in live city or first-class town of not less than five thousand population, located in good farming community. Apply Box 146, **HARDWARE AND METAL**, Toronto. (25ft)

RETAIL hardware business for sale; one of the largest and in best location in Toronto; largely cash business; in good running order; turnover for 1903 over \$35,000; can easily be increased to \$50,000; stock and tools about \$9,000. For particulars and terms address Box 152, **HARDWARE AND METAL**, Toronto, Ont. (28ft)

FOR SALE.

A FIRST-CLASS SAWMILL for sale cheap; in good condition; in good locality. Apply to Mrs. N. Fulton, Box 50, Fingal, Ont. f



We are Busy as Bees

every working day of the year making Paints, Oils, Varnishes, Enamels, Stains, etc., for the 5,000,000 and more people who inhabit this Dominion.

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for Fresco Painters and Decorators. Twenty colors.

SEND FOR OUR CATALOGUE AND PRICES

STANDARD PAINT & VARNISH CO., Limited
WINDSOR, ONT.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size. Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street.

A trial order will prove to you that there is nothing better than

SOLARINE Metal Polish

Sells wherever introduced.
Only try it and convince yourself.
For Ontario, address:

HENRY F. FALKINER, 60 George St., Toronto

Linseed Oil

To-day's price in London is £18 1s od. I offer 50 barrels, raw, at £17 15s od, c.i.f. Montreal, which price with duty is less than 41c. per gallon. Also 50 barrels refined at £19 5s od, c.i.f. Montreal.

J. W. L.,

P.O. Box 1157,
Montreal.

McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES.

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GLUES

of every kind, and for every purpose. Our glues enjoy large sales in almost all countries of the world, and our brands are generally to be seen amongst good stocks of glues. We believe we are giving better value than any other manufacturer, and we want to submit our lines to the Canadian test. Samples gladly sent in reply to enquiries.

GROVE CHEMICAL CO. Ltd., Appley Bridge,
Lancashire, Eng.

TRADE



MARK

Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works or from the principal Color Dealers in Canada



"Island City" Paints Win Trade

Paints with this label will make their own way with very little pushing. You don't have to do it all yourself. One sale will always lead to another.

P. D. DODS & CO., Montreal, Toronto, Vancouver

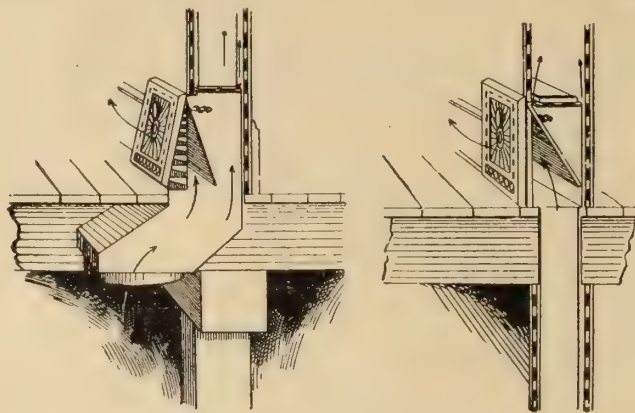
STOVES AND TINWARE

*ADVANCED MEHODS OF WARM AIR HEATING.

IN consideration of the fact that a great many furnace dealers oppose a plan of warm air heating where two rooms are to be heated from one supply pipe, and knowing from experience that the same is practical, the writer was prompted to describe a system which has been used successfully for the past three winters to heat a residence, where seven basement or supply pipes are used for heating 13 rooms. These supply pipes have a larger cross section than would be necessary were they intended to heat but one room; indeed the area of the cross section is just twice that of a pipe to heat one room.

While a prejudice has existed and may exist at the present time in the minds of a great many furnace dealers or warm air heating experts against a plan of heating two rooms from one supply pipe, it is no doubt owing to the fact

branching from the main supply pipe and attempting to carry the air in another direction, which would necessitate



Arrangement of Registers.

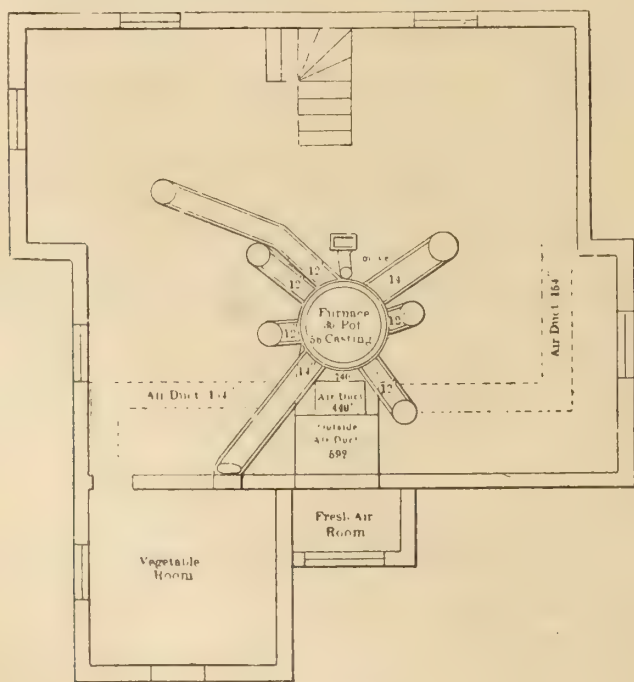
an angle, or possibly an elbow, to change the course of the air from the course it was traveling in the main supply pipe, where it is next to impossible to successfully heat two rooms with one

years several thousand warm air furnace dealers have tried this system and have found it thoroughly practical.

In the residence referred to there are six rooms and a hall on the first floor

and six rooms on the second floor, which have a total content of 23,548 cubic feet. There are 504 square feet of glass surface and 2,267 square feet of exposed wall surface, equivalent to 236 square feet of glass surface. In all there is an equivalent of 740 square feet of glass surface.

In estimating the amount of warm air necessary for heating a given room, a plan, which has been followed successfully during 20 odd years of experience in the furnace business, is to reduce the exposed wall surface to glass surface, and divide the exposed wall surface by the thickness of the wall in inches— in no case less than ten—and add this to the actual glass surface. Then multiply this by 75 and add to the cubic contents; multiply this by .013 and that gives the area in square inches of pipe cross section to heat a given room to 70 degrees Fahr. when the outside temperature is zero. One per cent. should be added for each degree below zero. This rule applies for warm air pipes for heating rooms on the first floor, where the velocity of the air in the basement pipes is 100 feet per minute, when the pipe has an elevation of one in twelve; but inasmuch as the velocity increases when the elevation of the pipe is increased, and as the velocity of the air in the wall pipes leading to the second floor is

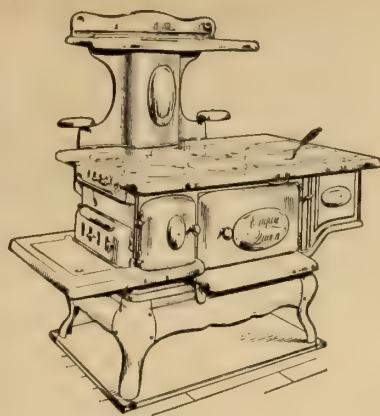


Plan of Basement.

that they have never given this system a trial, or because they have attempted to heat two rooms on the same floor by

pipe. The system herein described, however, is on an entirely different plan. Wherever it has been tried it has proved a success, and is admitted to be along advanced lines. During the past three

*Synopsis of paper read by A. O. Jones before the American Society of Heating and Ventilating Engineers.



The Empire Queen.

You
Can Sell
the
Empire Queen
Range

There is not a woman who knows anything about a stove but what will approve of

The Empire Queen Range

It is built for business—easy to clean, looks well, is easy on fuel, draft arrangements are perfect, making it a rapid cooker.

Send for descriptive booklet
and price list

The

Canadian Heating and Ventilating Co.,

Limited

OWEN SOUND, CNT.



Have You Noticed

that almost the only lye that
one hears about is

Gillett's Lye?

There was a time when Gillett's Lye struggled to make its merits known. To-day is its day of victory.

E. W. GILLETT COMPANY LIMITED

TORONTO

Grand Idea Ranges

The kind that never fail

These ranges have the qualities that make them easy to sell, and they are built to please the customer.

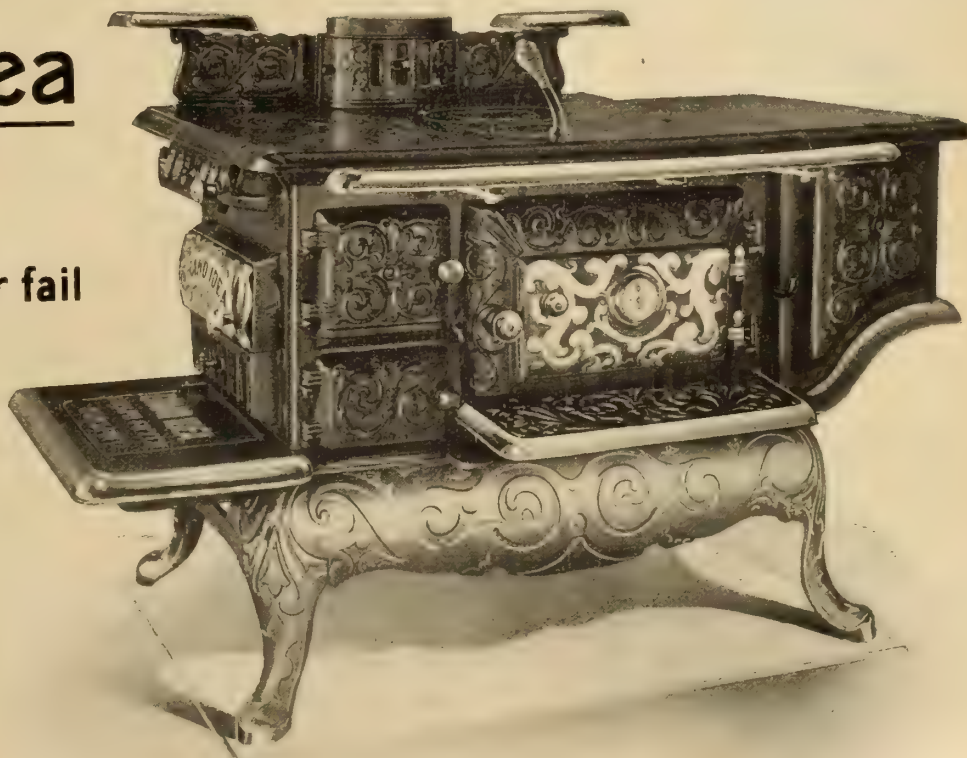
Construction—PERFECT.

Operation—SIMPLE.

Finish—ELEGANT.

Price—RIGHT.

If you are feeling the competition of the other fellow and are not getting your share of the range trade, perhaps it is because you haven't a Complete, Reliable, Up-to-date line like the GRAND IDEA. Booklet mailed upon request.



GUELPH FOUNDRY CO., Guelph, Ont.

Western Representatives: E. G. LOW & CO.,
Market St., Winnipeg, Man.

**WORK AND
PRICES
RIGHT**

GALVANIZING ONT.
WIND
ENGINE & PUMP CO.
TORONTO, ONT. LIMITED.

Order a stock of

"Windmill Best" Galvanized Sheets

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.
STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.
Canadian Agent,

F. HANKIN, - Montreal



COLE'S SPIRAL TUBULAR RADIATOR

Can be used
on any stove

Best radiator made
—at half the cost
of inferior goods.

Only radiator
made adapted for
soft coal.

Size pipe collar,
5, 6 and 7 inches.

For Sale by
E.T. Wright & Co.
Hamilton, Can.

MODERN MAGIC!



No more matches required to light the gas.
The "IGNITO" Mantle lights when the gas is turned on.
Write for booklet and samples.

The **International Gas Appliance Co., Limited**
164 BAYS TREET, TORONTO, Canada

300 feet per minute, they can be much smaller; and, in this case, the wall pipe which conveys the warm air to the second floor rooms has an area of 40 per cent. of the necessary area for heating rooms of the same size and exposure on the first floor.

From the illustration it will be noticed that specially constructed side wall registers have been used, which are so constructed that they have an opening sufficiently large to take care of all the air that the basement pipe can supply.

In the rooms on the first floor, where more than 78 square inches are necessary, and where the room above is also heated from the same supply pipe, a No. 17 register has been placed, the bottom opening of which has an area of 113 square inches. This is connected to the furnace with a 14 inch pipe, which has 154 square inches area. The question no doubt will arise: How can 154 square inches pass through the bottom of this register, which has but 113 square inches opening? By way of explanation it may be said that in the basement pipe of 154 square inches, where the velocity is 100 feet per minute, 117 cubic feet of air will be discharged per minute; but the velocity of the air increases when the elevation is increased, and as the elevation in this case is increased at the first turn of the elbow, it is estimated that this air is traveling at the velocity of 150 feet per minute when it is passing through the bottom of these register boxes. It will be seen that 79 cubic feet of air will pass through this opening at a velocity of 100 feet per minute, and 118 cubic feet at a velocity of 150 feet per minute, or more than a 14 inch pipe will supply. In rooms on the first floor, where less than 78 square inches are necessary, a No. 15 register is used.

It might be well to explain that while all but two of the rooms on the first floor require 78 square inches of the pipe area and that 12 inch pipes with 113 square inches area are used to convey the air from the furnace to the bottom of these registers, the wall pipe, which continues from the top of the registers to the rooms on the second floor, has an area of 35 square inches, and, inasmuch as each register is supplied with an adjustable diaphragm, which can be used as a deflector, the warm air is divided while it is traveling upward, which is the only place that it can successfully be divided, and fifty-five cubic feet of air per minute is discharged into the rooms on the first floor and about an equal amount is discharged into the rooms on the second floor.

It is owing to the fact that the air for these two different rooms is divided, while it is traveling upward, or through a perpendicular conductor, that it is pos-

sible to successfully divide the air for the different rooms to be heated, while, if this division were undertaken while the air was traveling through a horizontal pipe, it will readily be seen that it cannot successfully be done on account of the warmer air hugging the top of the supply pipe. If this division were undertaken while the pipe was running horizontally, the branch nearest the top of the supply pipe would naturally rob the supply pipe, and the branch would not get its share of the warm air, in which case but one room would be heated successfully at one time, as has been proved in many cases. This, no doubt, has caused the prejudice before referred to.

In order that the description of this system may be more thoroughly understood, a plan of the basement is given, showing the location of the furnace, air ducts, warm air pipes, etc., and also the plan of arrangement of registers in the walls. After finding the amount of air necessary for each room and adding all together we find how much air is necessary. The next thing is to have a furnace large enough to allow this amount of air to pass through it between the castings, or the furnace proper, and the casings, and to have an air duct with sufficient unobstructed area to supply the amount of air. If this air is taken from the outside of the building it will be well to remember that when heating it from a temperature of zero to 175 degrees above zero it will expand about 20 per cent, but if a greater allowance is made, the air supply in all probability will be inadequate; and more trouble has arisen in warm air heating from a lack of air than from a lack of heat, for it matters little how hot a furnace is unless there is sufficient air delivered to it to utilize the heat as it passes over the furnace on its way to the rooms to be heated. Then, with a proper air supply, a furnace large enough to allow this air to pass through the warm air pipes, and the furnace so constructed as to heat this air while it is passing over the heating surface of the furnace, there can be no failure in warm air heating, if the rooms to be heated are properly ventilated, so that a circulation of air is secured, unless the warm air is cooled while passing through the basement pipes, and this can be prevented in a great measure by using a few large basement or supply pipes instead of using many small pipes or one for each room to be heated.

Another feature of this system or plan of heating is that no coal dust or odor from the basement is delivered into the rooms, as no air from the basement can enter the warm air pipe; and air for protection, instead of being taken from the cellar or coal bin, is drawn out of the rooms being heated, through the opening at the bottom of the registers, which is made for the purpose of ventilating the rooms being heated and protecting the wall pipes from overheating.

Have you
tried it?
Tried what?
**SELLING
MANTELS.**



This is in your line of business, and it will
pay you.

The Batty Stove & Hardware Co
78 YORK ST., TORONTO.

WE WANT WORK

Old Stove Parts Re nickeled
Like New.

Put your Stove parts in a box and send
to us. We do the rest.
Good as the best. Cheap as the cheapest.

Long Distance Phone, Main 2993.

FAIRGRIEVE MFG. CO.,
TORONTO.

**A PERMANENT
and Handsome Roof.**



Arrow Brand Asphalt Ready Roofing.

Will bring you profitable trade and satisfied customers. Comes in rolls ready to
lay, all ready covered with gravel. Requires no experience to lay, and lasts
for years without further attention.

A. C. JENKING, Sole Agent,
Room 215 Coristine Building, - **MONTREAL.**
Sole agents being appointed in each district. Write to-day.

When in want of

**Hayfork Pulleys,
Barn Door Hangers,
Jack Screws,**

**Mrs. Potts Irons,
Diamond Dampers,
Etc.**

Order from

The H. R. Ives Co., Ltd., - Montreal

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Tool Steel Axe Steel Double Shear Steel Blister Steel
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CAMPING OUTFITS

for Fishing and Camping
Parties, Picnics, etc.

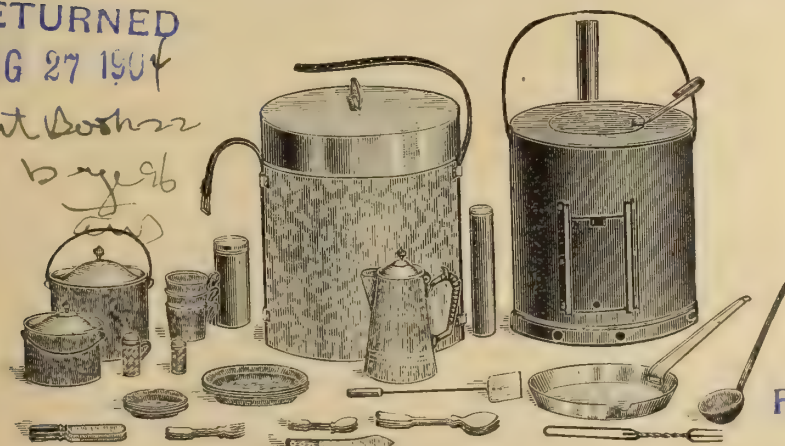
SUPPLIED THROUGH THE TRADE ONLY.

Comprising 55 Articles, for 6 Persons.

RETURNED
AUG 27 1904

Out Dishes

by 96



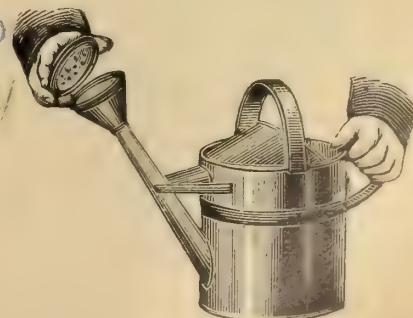
ALSO FITTED OUT FOR 3 PERSONS.

- 1 Large Galvanized Bucket, with strap and loose cover.
- 1 Wood Cook Stove, with cover, lifter, elbow and loose bail.
- 1 Tin Fry Pan, with folding handle.
- 1 Colonial Enamelled Pail, 400.
- 1 Colonial Enamelled Pail, 800.
- 6 Colonial Enamelled Soup Plates, 9 inches.
- 6 Colonial Enamelled Dinner Plates, 7 inches.
- 6 Colonial Enamelled Mugs, loose handle.
- 6 Table Knives, good quality.
- 6 Table Forks, nickel plated.
- 6 Table Spoons, nickel plated.
- 6 Tea Spoons, nickel plated.
- 1 Salt Caster.
- 1 Pepper Caster.
- 1 Colonial Coffee Pot, 013 1/2.
- 1 Round Slip Cover Tin, 1 lb.
- 1 Round Slip Cover Tin, for cutlery.
- 1 Butcher's Knife.
- 1 Daisy Flesh Fork.
- 1 Cake Turner.

55

RETURNED

AUG 27 1904



WATERING POTS Patent Rose

Plain, Jappanned, Green, or Galvanized.

Made in seven different sizes, from 1 to 16 quarts

The THOS. DAVIDSON MFG. CO. Limited. . . . MONTREAL.

HEATING AND PLUMBING

THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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THE PLUMBING SUPPLIES MARKET.

Quebec.

Office of HARDWARE AND METAL,
232 McGill Street,
Montreal, August 5, 1904.

GOOD business is still reported in plumbing supplies. A fair and steady demand continues, but nothing of unusual amount in any one line. Soil pipe and lead pipe business con-

tinues very satisfactory. A good many orders have been booked for iron pipe, for jobs that will require pipe later in the season.

Range Boilers—A nominal business is being done, and a fair number of these have been shipped. Prices as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

Lead Pipe—The market continues brisk and good business is reported. Prices are firm at our former quotations. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f. o. b. Montreal, Toronto, St. John, N. B., and Halifax; f. o. b. London, 15c per 100 lbs. extra; f. o. b. Hamilton, 10c per 100 lbs. extra.

Soil Pipe and Fittings—This line continues very satisfactory, discounts as before. Light soil pipe, 3 to 6 in., 50 and 10 per cent; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

Iron Pipe and Fittings—A more than usual demand for iron pipe was experienced this week, due to the fact that a good many orders are for future shipment. Prices are quoted on application, as the real conditions cannot be arrived at. Subject to concessions, we quote nominal prices as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

Solder—There is no noted change in the price of solder this week. Bar solder is quoted at 17 1-2c, and wire at 18c.

Soldering Irons—Prices are as follows: 1 to 1 1-2 lbs., per lb., 37c; 2 lbs. and over, 34c.

Ontario.

Office of HARDWARE AND METAL,
10 Front street east.
Toronto, August 5, 1904

THE dullness noted in trade on this market last week is not now noticeable. Things are on much the same basis as before the convention of the National Master Plumbers' Association. Business in all lines is quite fair. Quotations remain unchanged since last week. The prices quoted for iron pipe and fittings are about as low as it is expected they will go.

Lead Pipe—Business is very fair. The slackening off noted last week is not now felt. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

Soil Pipe and Fittings—Trade is very fair. Prices are easy, but there is no change in quotations since last week. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

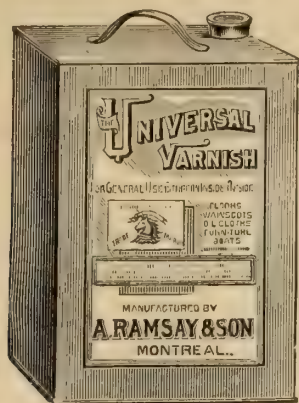
Iron Pipe and Fittings—Prices are not likely to reach a lower ebb than that here quoted. A very good business is being done at the low prices. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1-2 to 70 per cent.

Copper Range Boilers—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

Iron Pipe—The low prices noted last week still continue, but it is thought that prices have reached bottom level. A fair trade is being done. We quote f. o. b. Toronto as follows: Black pipe, 1-8 in., \$1.85 to \$1.95; 1-4 in., \$1.90 to \$2.05; 3-8 in., \$2 to \$2.25; 1-2 in., \$2.25 to \$2.35; 3-4 in., \$2.85 to \$3; 1 in., \$4 to \$4.25; 1 1-4 in., \$5.75 to \$6; 1 1-2 in., \$7 to \$7.25; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.65 to \$2.80; 3-8 in., \$2.80 to \$3; 1-2 in., \$3.15 to \$3.25; 3-4 in., \$4 to \$4.10; 1 in., \$5.90 to \$6; 1 1-4 in., \$8.25 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

Enamelled Ware—Prices are firm, and an active trade is being done. We quote: "Standard," 5 1-2 feet, 2 1-2 in. rolled rim, first quality, at \$21.60; second quality \$16.35.

YOUR VARNISH TRADE



Try a varnish that will sell and keep its reputation, while making customers for you.

Let it be a varnish already established, long tried and proved.

Then you make a profit, as good varnishes pay the dealer well.

RAMSAY'S UNIVERSAL

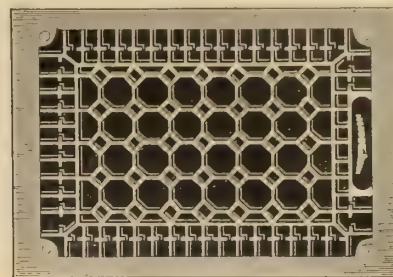
is a seller, returns handsome profits, makes a reputation, satisfies all. It's for boats, counters, desks, doors, carriages, floors, etc. Ask for our booklet explaining about the rebate that goes with each can to your customer and how we pay it—not you.

A. RAMSAY & SON
MONTREAL

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VARNISH
MAKERS

"REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

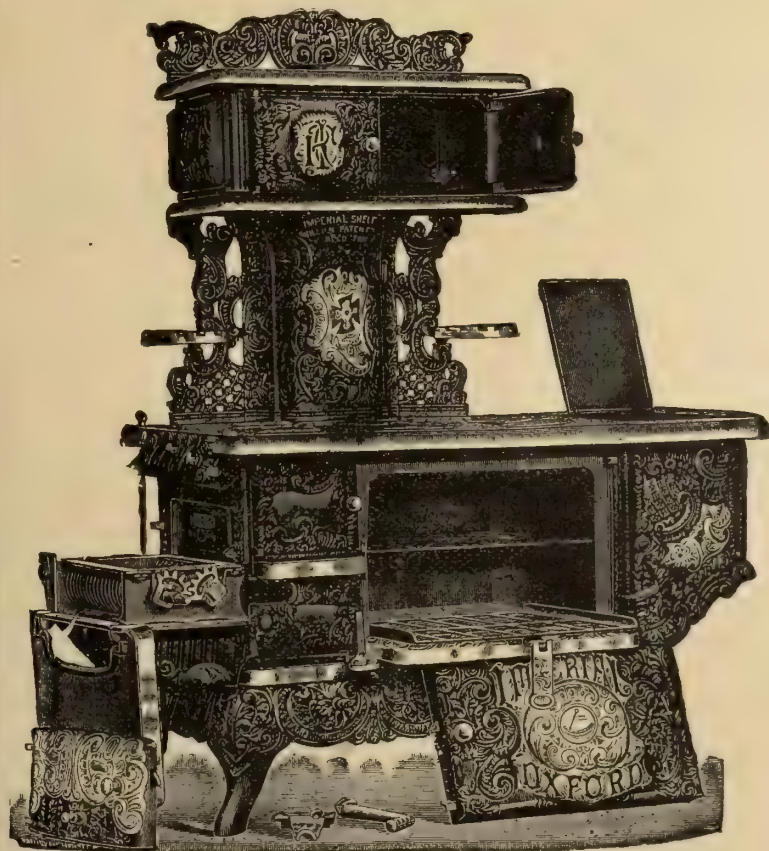
OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



When you are tired of the continual kicking from customers at the poor results they are getting from the stoves you supply them, write us and we will tell you all about the

Imperial Oxford Range

The range that is giving such good results in so many homes—building up business for so many merchants—the range every one acknowledges is all right. Write us to-day.

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MONTREAL.

Traveling Halifax Plumbers.

AFTER the close of the convention in Toronto of the National Master Plumbers' Association of Canada five of the delegation from Halifax visited St. Louis and other points of interest in the United States. They were James G. Crump, of Crump & Perrier; James Farquhar, of Farquhar Bros.; W. N. Forbes, of Wm. Stairs, Son & Morrow, Limited; Geo. Kinsman, of Day & Kinsman. On Friday, the 29th, they reached Toronto on their return journey and were taken in charge by Mr. A. Britton, of the James Morrison Brass Mfg. Co. They paid a visit to Hardware and Metal. In conversation with a representative of this paper they said that they had had a delightful time at the exhibition, and the same experience had been their lot in Toronto. By the time they reach Halifax they will have covered a distance of about 2,600 miles.

Wishes a Filter System.

Editor HARDWARE AND METAL:

I would like to ask if some reader of your paper could give me practical information on putting in a filter. I am putting in a large cistern and beside it a smaller one. I wish to filter rain water from the large into the small cistern to make it fit for drinking purposes. I would like to know what size to make this filter and how to arrange it. It will require to be close to the bottom to be useful when the water is low, and also must be set horizontally. How am I to prevent the filling from falling away from the top and letting the water pass through unpurified? The cisterns will be galvanized tanks, set in the cellar.

N. A.

Building Notes.

A new Presbyterian church is being erected at Cayuga, Ont.

A residence is to be erected on College avenue, Winnipeg.

The construction of the Moose Jaw General Hospital is now well under way.

The corner stone of the General and Marine Hospital, Collingwood, Ont., has been laid.

Berwick & Finsilver, Winnipeg, are going to erect a new hotel on Jarvis avenue and Derby street, to cost \$11,000.

The Government proposes to spend \$20,000 for an addition to the postoffice in London, \$10,000 for a new military stores in same city and also \$3,000 for military magazines.

The company controlling the Union Stock Yards at Toronto Junction propose to erect a large hotel on Keele street for the convenience of drovers and others in connection with the cattle trade.

During the month of July 79 building permits were issued in the City of Montreal, representing a value of \$392,823.

These were for 63 houses, containing in all 108 dwellings, three stores, one warehouse, three factories, one school, two stables, and fourteen sheds. During the same month 59 permits for alterations were issued, for 55 houses, containing 67 dwellings, 9 stores, 3 theatres, two warehouses, 3 churches, 1 hotel, 1 stable, and 4 sheds, to cost in all \$87,598.

Building Permits Issued.

TORONTO.

J. Gibb, dwelling on Paul street, \$2,200.

R. H. Greer, dwelling on Bain avenue, \$2,000.

T. Gould, dwelling on First avenue, \$2,250.

J. Davis, dwelling on Rusholme road, \$2,500.

S. Horton, dwelling on Wright avenue, \$1,500.

Jas. Hall, dwelling on Bartlett avenue, \$4,000.

Ed. Brewer, dwelling on Sorauren avenue, \$2,500.

W. J. Kirby, dwelling on Rusholme road, \$5,000.

Mrs. J. Graydon, dwelling on Spadina road, \$5,500.

Dr. Freely, dwelling on Dovercourt road, \$4,500.

Jackson estate, alterations to warehouse, \$8,000.

W. J. Bain, dwelling on Sullivan street, \$2,000.

D. H. Gibson, dwelling on Markham street, \$4,000.

S. F. Henning, dwelling on Soho street, \$2,800.

G. T. Gorrie, dwelling on Hepbourne avenue, \$6,000.

Mr. Allen, dwelling on Markham street, \$2,000.

R. McCauley, dwelling on Bathurst street, \$4,200.

A. S. Humphrey, dwellings on Bulwer street, \$2,500.

F. J. Stokoe, dwelling on Sorauren street, \$3,000.

Snider estate, warehouse on Bay street, \$16,000.

J. A. Aberdeen, dwelling on Fuller street, \$4,000.

J. A. Taylor, dwelling on Smith street, \$1,500.

H. Reid, dwellings on Roxborough street east, \$4,000.

F. C. Mount, dwelling on Bartlett avenue, \$1,000.

Wm. Dawkins, dwelling on Chesley avenue, \$1,100.

Mrs. McNight, dwelling on Lansdowne avenue, \$1,500.

J. Utting, dwellings on Symington avenue, \$3,500.

F. G. Phippen, dwelling on First avenue, \$2,200.

W. Lunness, dwelling on Roxboro avenue, \$4,000.

H. Larkin, dwelling on Sorauren avenue, \$3,500.

H. F. Squires, dwelling on Euclid avenue, \$4,500.

F. S. Duff, dwelling on Montrose avenue, \$4,000.

Mrs. Lanskill, dwelling on Gladstone avenue, \$3,100.

A. C. Gibson, dwelling on Lansdowne avenue, \$3,000.

S. B. Coon, dwelling on McPherson avenue, \$2,800.

Rossin House Hotel Co., alterations to hotel, \$8,000.

Cowan Co., Limited, factory on Sterling road, \$60,000.

Oliver Adams, addition to dwelling on Glen road, \$1,000.

E. G. Woodley, dwellings on Davenport road, \$4,500.

A. W. Strickland, dwellings on Dundas street, \$4,000.

Vaughan & Craig, dwellings on Markham street, \$5,000.

J. W. Cowan, warehouse on Wellington street, \$35,000.

D. C. McArdle, dwelling on Beaconsfield avenue, \$1,200.

J. Kee and J. Swain, dwellings on Birtle avenue, \$4,200.

A. M. Ivey, alterations to dwelling on Isabella street, \$1,000.

H. J. Armstrong, dwelling on Chestnut Park road, \$4,000.

Mr. Cohen, alterations to store on Queen street west, \$1,500.

Gordon, Mackay & Co., factory on King street west, \$20,000.

R. Newell, stable and carriage house on St. George street, \$2,000.

C. L. Crosley, dwelling on St. George and Lowther avenue, \$11,000.

W. B. Charlton, dwellings on Waverley road and Queen street, \$4,000.

MONTREAL.

A. Guilbeault, St. Andre, one house, \$1,200.

O. E. Massay, Huntley street, one house, \$3,000.

P. Gauthier, 783 Cuvillier street, one house, \$3,000.

Israel Nantel, Frontenac street, two houses, \$3,400.

Hugh Paton, Richmond street, one factory, \$30,000.

Geo. Kemond, Papineau avenue, one dwelling, \$2,000.

J. N. Petreault, 220 Dufferin street, two houses, \$2,200.

Dr. J. A. Ranger, Ontario street, one house and store, \$4,000.

Fabien Groulx, Craig street, two apartment houses, \$6,000.

A. C. Leslie & Co., 551 St. Paul street, one warehouse, \$14,500.

J. W. Molson, alterations to two stores on St. Paul street, \$3,500.

Dominion Oilcloth Co., Parthenais street, one five storey factory, \$75,000.

Hogan estate, corner St. James and St. Francis Xavier, alterations to hotel, \$12,000.

QUEBEC.

G. Perrin, repairs to building on Chénier street.

M. Brunet, repairs to building on Hermine street.

M. Dugal, repairs to a building on St. Francois street.

Mme. Blouin, repairs to building on King street; Ed. Bouchard, contractor.

Cote & Co., contractors, repairs to building in Tresor street; F. Carrel, proprietor.

J. Rodrigue, for repairs to building on Commissioners street; L. Morency, contractor, cost, \$200.

C. P. R., for construction of a building in St. Peter street; W. J. Peters, contractor; cost, \$15,000.

LONDON.

E. Clement, dwelling on Duchess avenue.

Wm. Copp, residence on Beaconsfield avenue.

P-H



Trade Mark.

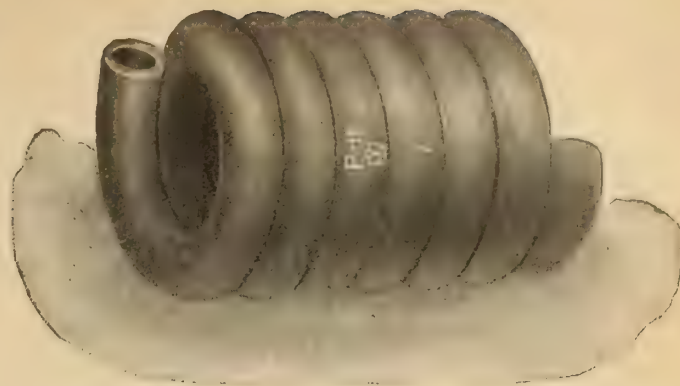
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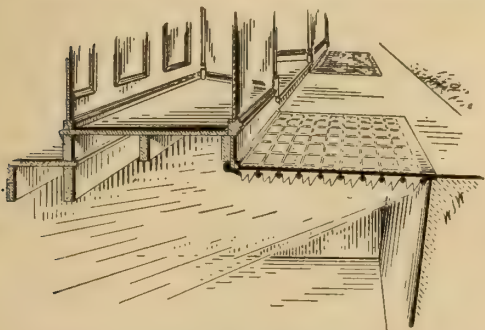
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TORONTO, ONT.**

INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE directorate of the Leroi mine, Rossland, B. C., are contemplating the construction of a large milling plant.

• • •

The Temiskaming and Northern Railway have been applied to by the Consolidated Lake Superior Co. for the contract for the rails to be used by that line. T. J. Drummond, vice-president of the company, says that the steel rail works at the "Soo" are ready to start operations. An abundant supply of Bessemer ore has been obtained in readiness for turning out the rails.

• • •

The Champion Manufacturing Co., 1586 Notre Dame street, Montreal, have built up quite a demand for their razor strops. The name "Champion" is very timely, as they claim to be the best in the market. In the special Spring number of Hardware and Metal they offered to send any prospective customer for \$1.00, five samples of their best selling razor strops, to retail at 15c, 25c, 40c, 60c and 75c, respectively. This allows the retailer to more than double his money, and at the same time sell a good article, and an article which is in constant demand. The firm are repeating this offer to the trade during August.

• • •

The contract price of the buildings to be put up in St. Johns, Que., for the Singer Sewing Machine Co., by James Stewart & Co., is said to be considerably over one million dollars. The structural iron alone—for which the Dominion Bridge Co. of Lachine has the order—will cost \$250,000. There are 22 buildings to be erected which will fairly well cover the 37 acres of land presented to the company by the town. Two of the shops are to be 760 by 60 feet, 4 stories. All will be constructed of brick and iron. It is intended to have 17 of the 22 buildings covered in this Fall and completed during the Winter, ready for the operators by the Spring. The shops will have sufficient capacity to give employment to 2,000 hands; but it is not ex-

pected that the company will commence operations with more than one-third—possibly not over one-fourth—this number of employes, but a rapid expansion of business is calculated upon.

NOTES.

The Galt Knitting Co., Galt, Ont., are going to enlarge their factory.

The Art Metal Co., Galt, Ont., have their new works almost ready to commence operations.

Fire has done damage to the extent of \$15,000 to the lumber mills of William Price, at Trois Pistoles, Que.

Hopkins & McEachren, manufacturers of upholstered furniture, Stratford, Ont., have sold out to Jas. A. Cline, Wingham.

The plant of J. L. Reaume & Co., stave manufacturers, Essex, Ont., has been destroyed by fire. The planing mill of Johnson Bros., of the same place, has also been destroyed.

A dispatch from Sydney, N. S., says that the properties of the Cape Breton Coal and Iron Company at Cacherones Lake, Cape Breton, have been disposed of to an English corporation which will operate them actively.

The Rat Portage Lumber Co. are now erecting a large modern sawmill on the site of the Harrison River Mills Timber and Trading Co.'s mill, at Harrison River, B. C. The Rat Portage company purchased the property recently.

A party of American capitalists are interested in the establishment of a plant at Brantford for the manufacture of plows and spreading machines. The Brantford Expositor thinks there is a chance of such an industry being established there.

COMPANIES INCORPORATED.

The Canadian Talking Scale Co., Limited, Toronto; capital, \$100,000; purpose, to manufacture automatic scales. The directors are: A. M. Macdonell, R. W. Ball and T. H. Barton, all of Toronto.

The Wilson Fyle Co., Limited, Niagara Falls; capital, \$20,000; purpose, to

manufacture and deal in medicines. The directors are: T. A. Wilson, W. J. Fyle and J. J. Foster, all of Niagara Falls, Ont.

The Lockhart Photo Supply Co., Limited, Toronto; capital, \$15,000; purpose, to manufacture and deal in photographic supplies. The directors are: F. R. Lockhart, A. Oakley and W. L. Matthews, all of Toronto.

The Canadian Cement Brick Co., Limited, Toronto; capital, \$150,000; purpose, to manufacture and deal in cement, brick, tile, and paving brick. The directors are: Wm. Williamson, C. D. Scott and J. T. Scott, all of Toronto.

The Dominion Cement Brick Co., Limited, Toronto; capital, \$50,000; purpose, to deal in all kinds of cement, cement brick, etc. The directors are: W. J. McMurtry, J. E. Webb, A. P. Ingrams, C. Niewhaus and J. D. Dobie, all of Toronto.

The Campbell Milling Co., Limited, Toronto Junction; capital, \$150,000; purpose, to operate grain mills, elevators, etc. The directors are: A. Campbell, E. M. Campbell, and D. A. Campbell, all of Toronto Junction; J. Knight, Toronto.

The Montreal Packing Co., Limited, Montreal; capital, \$500,000; purpose, to carry on the business of canners of meats, fruit and vegetables. The directors are: J. C. Lovell, London, Eng.; R. M. Ballantyne, P. W. McLagan, both of Montreal.

The Twin City Real Estate and Construction Co., Limited, Berlin, Ont.; capital, \$100,000; purpose, to carry on the business of the construction of dwelling houses. The directors are: S. Brubacher, J. Bingeman and J. H. Dirdgeon, all of Berlin.

The Silver King Gold and Copper Co., Limited, Toronto; capital, \$2,000,000; purpose, to carry on the operations of a mining, milling, reduction and development company. The directors are: H. L. Homes, Niagara Falls, N. Y.; W. H. Merrill and G. W. Morris, both of Buffalo, N. Y.

R. W. Oliver Milling Co., Limited, Montreal; capital, \$100,000; purpose, to take over the business of the R. W. Oliver Milling Co. The directors are: R. W. Oliver, J. Ronald, W. J. Henderson, G. W. MacDougall, and L. Macfarlane, all of Montreal.

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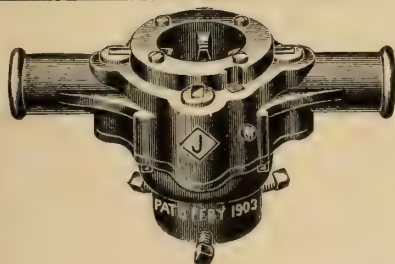
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It is a fact that one man with our **PATENT
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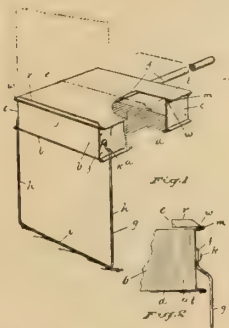
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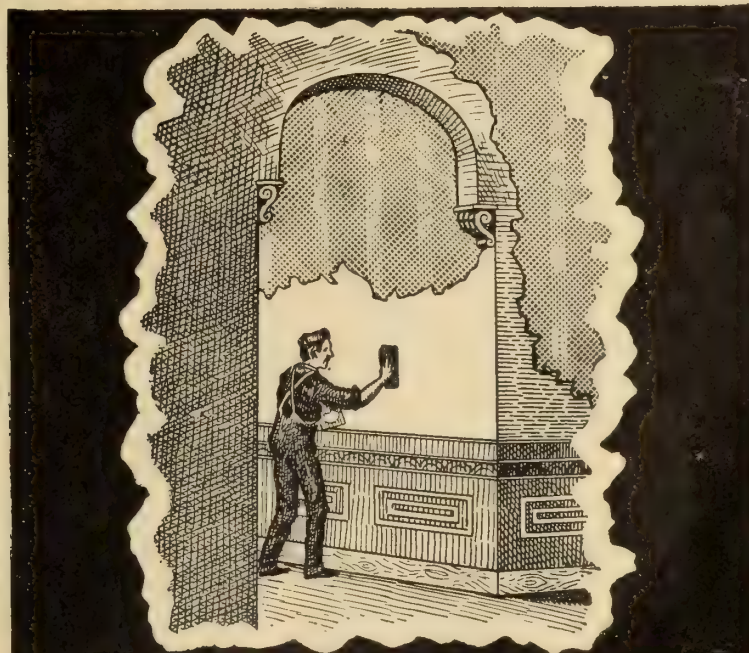
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bore for, manufacture, refine and deal
in oil. The directors are: H. V. Hagen,
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Sussex, N. B.

Pennsylvania Coal Co., Limited, Mon-
treal; capital, \$20,000; purpose, to carry
on business as fuel merchants. The di-
rectors are: Wm. Mitchell, Drummond-
ville, N. W. T.; L. E. Kimpton, H. L.
Mitchell, H. P. Mitchell and R. T. Hen-
eker, all of Montreal.

LICENSES GRANTED.

The Kamloops Lumber Co., Limited,
incorporated under the Dominion Gov-
ernment, to carry on their business in
Ontario.

IRON AND STEEL TARIFF.

THE report of Mr. Joseph Chamber-
lain's tariff commission on the
iron and steel trades arrives at
the conclusion that the decline of the
British iron and steel industry is due to
the fact that the manufacturers of Am-
erica and Germany have secured control
of the home markets by means of high
tariffs and an organized system of regu-
lation of their import trade, that they
are in a position to dump their surplus
products on the British and other mar-
kets, irrespective of cost, and that the
dumping could not be carried on except
for the British system of free imports.

The committee expresses the opinion
that the situation can only be remedied
by a system of tariffs arranged as fol-
lows:

(a) A general tariff consisting of a low
scale of duties for foreign countries ad-
mitting British wares on fair terms.

(b) A preferential tariff, lower than
the general tariff, for the colonies giving
adequate preference to British manufac-
tures and framed to secure freer trade
within the British Empire.

(c) A maximum tariff consisting of
comparatively higher duties, but subject
to reduction by negotiation to the level
of the general tariff.

The report, which is signed by fifty-
eight commissioners, is very bulky and
gives the evidence of British manufac-
turers, the evidence given before the
United States industrial commission on
iron and steel industries, the organiza-
tion and working of German kartelle,
and a vast amount of statistics, etc.

Work has commenced on the addition
to the Jeffery Hale Hospital, Quebec.

Kein Bros., Winnipeg, are contem-
plating the erection of a new hotel on
Sutherland avenue and Main street, to
cost \$30,000.

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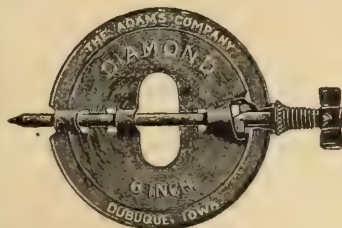
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"LOOK FOR THE BOY" ON EVERY ROLL

Your Money Back

We sell what we make on a money-back-if - not-as - represented basis. No inferior article can be sold on this plan.

ASBESTOS FURNACE CEMENT

is the strongest and most durable cement in use for setting up and repairing broken joints in Furnaces, Ranges, Heat-rs, Stoves, etc.

Send for Circular.

G. F. STERNE & SON, Makers,
BRANTFORD, ONT.

FINANCE AND INSURANCE

STATISTICS of failures in Canada for the six months ending June 30 have been made public. As compared with last year they are far from satisfactory. Liabilities exceed in amount those for any year of the preceding six, although the number of failures is less than in 1903. The total number of failures was 583, as compared with 492 last year, but the liabilities were \$6,060,733 this year and only \$3,395,637 last year. Manufacturing failures numbered 149, with liabilities of \$2,354,498, as against 107 failures and an indebtedness of \$1,045,843 a year ago. Trading failures were 420 in number and \$3,454,968 in amount, against \$2,207,691 in 1903. In banking alone was there any improvement over 1903, two small suspensions of \$30,749 comparing favorably with four defaults and \$2,139,225 the preceding year. As to location, the chief increases occurred in Ontario and Quebec, but every province showed more or less rise except New Brunswick.

EXPANSION is the key-note of the June statement of the chartered banks of Canada. Since 1896 this expansion has been constant and even remarkable. Naturally, now that the crops have begun to move, an increase in the circulation of bank notes was to be expected, but it must have been surprising to many to find that the increase of June circulation over May circulation was \$300,000 more this year than last year. Deposits in the chartered banks expanded \$2,754,861 last year between May and June. This year they expanded \$5,205,260. The chief increase in deposits is shown in the deposits without interest and withdrawable upon demand. This expansion is what one would expect to find, establishing, as it does, normal relations with current loans and discounts.

IT would not be possible to find a more intricate or complicated money system than that at present in vogue in Manchuria. This is owing to the fact that they have not there a fixed recognized standard of silver which can be taken as a basis for exchange operations. Although China's currency is on a silver basis, yet there is no standard of silver common to all their provinces. For instance, the silver of Niuchwang has a touch of 99.2, or, in other words, 8 ounces of alloy to 992 ounces of pure silver. The touch of the silver of Liaoyang, Mukden, Kirin and Tieling is supposed to be the same as that of Yingkou, but it never is, Yingkou silver usually being finer by 1 or 2 ounces in the thousand. Kwangchingtsu silver has a touch of 99, which puts it below Yingkou silver, while, on the other hand, Harbin silver has a touch of 99.8, which puts it above that of Niuchwang. When we think that the touch is only one of the items which has to be taken into consideration in the everyday exchange operations which take place between the various Manchurian towns, we can understand that the negotiating of a rate between Chinese currency is not a simple matter. This constant practice in exchange of the Chinese banker accounts for much of his quickness of perception.

The hard coin currency in Manchuria consists of the sycee, small coin, and of late the ruble; yet the bulk of the merchandise bought and sold is not bought or sold against these hard effectives. All prices and rates quoted are against transfer money or mo-lu yingtzu—in other words, goods money, or huo yingtzu. This transfer or mo-lu yingtzu is a peculiar and muddled system. The arrival of the ruble and the establishment of quick communication with Manchuria, thus enabling

the rapid transportation of treasure to and from Manchuria, is in large part responsible for the muddling.

The transfer money is a purely nominal currency not substantiated in any way by an effective—in other words, it is a credit. We will say, for instance, that a merchant starts business in Niuchwang and that his capital is deposited in some bank in Shanghai. The first thing he will do will be to sell his draft on Shanghai in the market at the market rate. The purchaser will transfer to the credit of the merchant at the place where he banks the equivalent in transfer money of his draft, and with this credit he can purchase his goods or do his banking. This transfer money can at any time be sold for silver or ruble effectives.

The Chinese year has four settling days or mao-kou, when all transfer money which has been issued has to be released. The method of redeeming transfer money has undergone several changes during the last few years. The first system was that transfer money should be redeemed at full value in hard silver at the end of every three months. This system was continued until about two years after the Japanese war. During this period the effective currency was sycee and copper cash, small coin not having then made its appearance in large amounts.

NOTES.

The International Association of Accident Underwriters will meet at the Royal Muskoka Hotel in July, 1905.

The Crown Bank of Canada has purchased the private banking business of J. G. Hallett & Co. at Woodbridge.

The Crown Bank of Canada opened its Toronto office at 34 King street west on July 1, Mr. J. A. Ready being local manager.

The Michigan Bankers' Association were guests of the Toronto bankers on July 28. A banquet was given in the evening.

Mr. Robie Uniok, who died at Halifax on July 4, was for years president of the Halifax Banking Company, recently merged into the Canadian Bank of Commerce.

A movement is on foot among Canadian manufacturers to establish a mutual fire insurance company. The Canadian Manufacturers' Association is fathering the scheme.

The shareholders of the Traders' Bank of Canada passed a bylaw at the last annual meeting authorizing an increase of \$1,000,000 to the bank's capital stock to bring it up to \$3,000,000.

Liverpool & London & Globe

INSURANCE COMPANY

Capital and Assets exceed - \$60,000,000
Investments in Canada exceed 3,000,000
Claims Paid exceed - - - 200,000,000

The Toronto Agency of this Company, so long held by Joseph B. Reed, will in future be carried on by Joseph B. Reed & Sons, the partnership consisting of Joseph B. Reed, J. Carl Reed and LeGrand Reed.

Offices: 51 YONGE ST. Tel. Main 597

WESTERN ASSURANCE COMPANY.

Incorporated 1851

**FIRE
AND
MARINE**

Head Office Capital - \$2,000,000.00
Toronto, Assets, over - - 3,546,000.00
Ont. Annual Income - 3,678,000.00

HON. GEO. A. COX, President.

J. J. KENNY, Vice-President and Man. Director.

C. C. FOSTER, Secretary.

Money

CAN BE SAVED BY MEANS
OF AN ENDOWMENT POLICY.

**YOU CAN ONLY SECURE
SUCH A POLICY WHILE YOU
ARE IN GOOD HEALTH.**

Pamphlets and Full Particulars regarding the
New Accumulation Endowment Policy
sent on application.

Confederation Life ASSOCIATION.

W. H. BEATTY, PRESIDENT.

W. C. MACDONALD,
ACTUARY.

J. K. MACDONALD,
MANAGING DIRECTOR.

HEAD OFFICE, - TORONTO, CANADA.

BRITISH AMERICA ASSURANCE COMP'Y

FIRE AND MARINE.

Incorporated 1833

CASH CAPITAL, \$1,000,000.00.
TOTAL ASSETS, \$2,024,096.02.
LOSSES PAID SINCE ORGANIZATION, \$23,886,005.32.

HEAD OFFICE, - BRITISH AMERICA BUILDING,
Cor. Front and Scott Sts., Toronto.

HON. GEO. A. COX, President. J. J. KENNY, Vice-President
P. H. SIMS, Secretary. and Managing Director

THE CANADIAN BANK OF COMMERCE.

Paid-up Capital, - - \$8,700,000
Rest, - - - \$3,000,000

HEAD OFFICE: TORONTO, CANADA.

HON. GEO. A. COX, President. B. E. WALKER, General Manager.

The offices of this Bank number 110, distributed as follows:

LONDON, ENG., 60 Lombard St., E.C., NEW YORK, N.Y., 16 Exchange Place,
S. Cameron Alexander, Manager. Wm. Gray and H. B. Walker, Agents

104 Branches throughout Canada, including the following:

MONTREAL, F. H. Mathewson, Manager. TORONTO, John C. Kemp, Manager.
HALIFAX, H. N. Wallace, Manager. VANCOUVER, Wm. Murray, Manager.
WINNIPEG, John Aird, Manager. OTTAWA, Robert Gill, Manager.
ST. JOHN, N.B., J. G. Taylor, Manager. VICTORIA, Geo. Gillespie, Manager.
DAWSON, D. A. Cameron, Manager. HAMILTON, D. B. Dewar, Manager.

5 Branches in the United States, including the principal cities of the Pacific Coast:

SAN FRANCISCO, CAL., Arch. Kains, Manager. SEATTLE, WASHINGTON, G. V. Holt, Manager.
SKAGWAY, ALASKA, H. M. Lay, Manager. PORTLAND, OREGON, E. A. Wyld, Manager.

A General Banking Business Transacted.

Foreign Exchange Bought and Sold.

The distribution of its Canadian branches covering all the principal cities and towns throughout the Dominion, its own offices in England and the United States, and its correspondents in all parts of the world, enable The Canadian Bank of Commerce to offer unexcelled facilities to merchants, manufacturers and exporters for the transaction of their business.

MANUFACTURERS AND MERCHANTS.

It may be necessary for your staff to have fidelity bonds. We act as surety on such. We are known the world over.

Write to us for terms and particulars.

The London Guarantee & Accident Co., Limited,

D. W. ALEXANDER, General Manager for Canada,
Canada Life Building, - - - TORONTO.

CAPITAL PAID UP, - - \$1,000,000.
RESERVE FUND, - - 1,000,000.

THE METROPOLITAN BANK.

DIRECTORS

R. H. WARDEN, D.D., President S. J. MOORE, Esq., Vice-President
D. E. THOMPSON, Esq., K.C. His Honor W. MORTIMER CLARK, K.C.
THOS. BRADSHAW, Esq.

HEAD OFFICE, - TORONTO.

W. D. ROSS, GENERAL MANAGER.

GENERAL
BANKING
BUSINESS
TRANSACTION

SAVINGS DEPARTMENT

at all Branches.

ACCOUNTS SOLICITED

Drafts Bought and Sold.
Letters of Credit Issued.

American Steel & Wire Co.

New York
Empire Building

Montreal
N. Y. Life Building

Chicago
The Rookery

BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

PAINTS AND OILS.

COLORS IN OIL.

1-lb. tins, pure.

Venetian red, per lb.	0 08
Chrome yellow	0 15
Golden ochre	0 88
French	0 06
Marine black	0 04
Chrome green	0 10
French permanent green	0 13
Signwriters' black	0 15

COLORS DRY.

Pure in bbls., per cwt.	Less than this
quantity to extra.	
Common ochre, bbls.	2 50
Yellow ochre	1 12½
Brussels ochre	2 75
Venetian red	1 50
English oxides	3 00
American oxides	1 25
Canadian red oxides	1 50
Super magnetic oxides, 93 p.c.	2 00
Burnt sienna	9 00
"umber	6 00
Raw umber	6 00
Drop black	12 00
Chrome yellow	0 18
Chrome greens	5 50
French green	0 09
Golden ochre	2 75
Ultramarine blue, in 28-lb. bxs	7 00
Fire proof mineral	1 00
Genuine Eng. Litharge	4 50
Mortar color	1 00
Pure Indian red, lb	0 09
Whiting, bbl	0 65
English vermilion in 30-lb. bgs.	0 85

WHITE LEAD.

Per 100 lb.

Pure	4 75
No. 1	4 50
No. 2	4 25
No. 3	3 87½
No. 4	3 50
Munro's Select Flake White	4 75
Elephant and Decorators' Pure	4 75
Monarch	5 00
Decorator's Pure	4 75
Essex Genuine	4 25
Sterling Pure	5 00
Island City Pure	5 00
Ramsay's Pure Lead	4 75
Ramsay's Exterior	4 50

RED LEAD.

Genuine, 560 lb. casks, per cwt	\$4 25	\$4 50
Genuine, 100 lb. kegs	4 75	
No. 1, 560 lb. casks, per cwt	4 00	
No. 1, 100 lb. kegs, per cwt	4 25	

WHITE ZINC.

Extra Red Seal	0 06	0 08
French V. M.	0 06	0 06½
Lehigh	0 06	0 06½

DRY WHITE LEAD.

Pure, casks	4 25
Pure, kegs	4 50
No. 1, casks	4 00
No. 1, kegs	4 25

PREPARED PAINTS.

In ½, ¼ and 1-gallon tins.

Pure, per gallon	1 20
Second qualities, per gallon	1 00
Barn (in bbls.)	0 60
The Sherwin-Williams paints	1 30
Canada Paint Co.'s pure	1 25
Toronto Lead & Color Co.'s pure	1 25
Sanderson Peary's pure	1 20
Standard Co.'s "New Era"	1 30
"Globe" barn	60
Francis-Frost Co.'s "Ark B'd	1 25
British Navy deck	1 50
Henderson & Potts's "Anchor"	1 35
Ramsay's paints, Pure, per gal.	1 20
"Thistle,	1 00
"Outside, bbls	0 55
Island City House Paint	1 25
"Floor	1 25
Sterling House Paint	1 20
"Floor	1 10
National	1 05

PUTTY.

Bulk in bbls.	1 45
Bulk in less quantity	1 70
Bladders in bbls.	1 70
Bladders in kegs, boxes or loose	1 85
25-lb. tins	1 80
12½ lb. tins	2 05
Bladders in bulk or tins less than 100 lb.	1 85

VARNISHES.

In 5-gal. lots.	Per gal.	Net.
Carriage, No. 1	1 50	1 60
Pale durable body	4 10	4 25
"rubbing	2 85	3 20
Gold size, japan	1 50	1 60
No. 1 brown japan	0 85	0 90
Elastic oak	1 50	1 70
Furniture, extra	1 10	1 25
"No. 1	0 90	1 00
Hard oil finish	1 35	1 50
Light oil finish	1 60	1 70
Damar	1 75	2 00
Shellac, white	2 40	2 50
"orange	2 30	2 40
Turpentine, brown japan	1 10	1 20
"black japan	1 10	1 20
"No. 1	0 85	0 90
Elastilite varnish, 1 gal. can, each	2 00	2 00
Granitine floor finish, per gal	2 75	
Maple Leaf coach enamels; size 1,	\$1.20;	
size 2, 70c.; size 3, 40c. each.		
Sherwin-Williams' kopal varnish,	assorted	
case, from	1 gal., \$2.50.	

GLUE.

Common	0 08	0 08½
French medial	0 10	0 14
White, extra	0 18	0 22
Gelatin	0 18	0 22
Strip	0 18	0 20
Coopers	0 19	0 20
Huttner	0 12	0 16
Ground	0 12	0 16
Cologne, genuine		

HARDWARE.

AMMUNITION.

Cartridges.

B. B. Caps Dominion, 50 and 5 and 25 per cent.	
Rim Fire Pistol, discount 30 p.c., American.	
Rim Fire Cartridges, Dominion, 50 and 5 p.c.	
Central Fire, Military and Sporting, American, add 20 per cent. to list. B. B. Caps, discount 40 per cent., American.	
Central Fire Pistol and Rifle, 5 p.c., Amer.	
Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.	
Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.	
Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.	
Rival and Nitro, 10 per cent. advance on list.	
Brass Shot Shells, 55 per cent.	
Primers, Dom., 30 per cent.; American, \$1.75	

Wads.

per lb.

Best thick brown or grey felt wads, in ½-lb. bags	\$0 70
Best thick white card wads, in boxes of 500 each, 12 and smaller gauges	0 99
Best thick white card wads, in boxes of 500 each, 10 gauge	0 35
Thin card wads, in boxes of 1,000 each, 12 and smaller gauges	0 20
Thin card wads, in boxes of 1,000 each, 10 gauge	0 25
Chemically prepared black edge grey cloth wads, in boxes of 250 each—	Per M.
11 and smaller gauge	0 60
9 and 10 gauges	0 70
7 and 8	0 90
5 and 6	1 10
Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each—	
11 and smaller gauge	1 15
9 and 10 gauges	1 40
7 and 8	1 65
5 and 6	1 90

ADZES.

Discount 20 per cent.	
Wright's, 80-lb. and over	0 10½
Hay Budden, 80-lb. and over	0 09½
Brook's, 80-lb. and over	0 11½

Woodyatt Hudson, per doz., net	4 50
Gilmour's, discount 65 and 5 per cent. off list.	

Chopping Axes	
Single bit, per doz.	7 00
Double bit, "	10 00

Bench Axes, 40 per cent.	
Broad Axes, 25 per cent.	
Hunters' Axes	5 50
Boys' Axes	6 25
Splitting Axes	7 00
Handled Axes	10 00

AMERICAN AXE AND TOOL CO.	
Red Ridge, boys', handled	5 75
"hunters'	5 25
Underhill American Bench Axes, 40 p.c.	

AXLE GREASE	
Ordinary, per gross	6 00
Best quality	10 00

BELLS.	
Hand.	
Brass, 60 per cent.	
Nickel, 55 per cent.	

Cow.	
American make, discount 63½ per cent.	
Canadian, discount 45 and 50 per cent.	

Door.	
Gongs, Sargent's	5 50
"Peterboro', discount 50 and 10 per cent. off new list.	

Farm.	
American, each	1 25
House.	
American, per lb.	0 35

BELLOWS.	
Moulders, per doz.	7 50
Blacksmiths', discount 40 per cent.	

BELTING.	
Extra, 60 per cent.	
Standard, 60 and 10 per cent.	
No. 1, not wider than 6 in., 60, 10 and 10 per cent.	

Agricultural, not wider than 4 in., 75 per cent.	
Bits.	
Gilmour's, discount 60 per cent.	
Rockford, discount 50 and 10 per cent.	
Jennings' Gen., net list.	

Car.	
Gilmour's, 47½ per cent.	
Expansive.	
Clark's, 40 per cent.	

Gimlet.	
Clark's, per doz	0 65
Diamond, Shell, per doz	1 00
Nail and Spike, per gross	2 25

BLIND AND RED STAPLES.	
All sizes, per lb.	0 07½

BOLTS AND NUTS	
Carriage Bolts, common (\$1 list)	Per cent.
" 3-16 and ½	60 and 10
" 5-16 and ½	55 and 5
" 7-16 and up	55 and 5
" full sq. (\$2.40 list)	60
" Norway Iron (\$3 list)	60

Machine Bolts, all sizes, ½ and less	60
Machine Bolts, 7-16 and up	60
Plough Bolts	55 and 5
Blank Bolts	55 and 5
Bolt Ends	55 and 5

Sleigh Shoe Bolts	70
Coach Screws, cone point	70
Nuts, square, all sizes, 4c. per lb. off.	
Nuts, hexagon, all sizes, 4½c. per lb. off.	
Stove Rods, per lb., ½ to 6c.	

ROOT CALKS.	
Small and medium, ball	per M. 4 25
Small heel	4 50

BRIGHT WIRE GOODS.	
Discount 62½ per cent.	

BUTCHERS' CLEAVERS.

German	per doz.	6 00
American	"	12 00

BUTCHER KNIVES.

Bailey's	per doz.	0 60
		6 30

BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.	1 85
Ready roofing, 2-ply, not under 45 lb. per roll	0 90
Ready roofing, 3-ply, not under 65 lb. per roll	1 15
Carpet Felt	per ton 45 00
Heavy Straw Sheathing	per ton 35 00
Dry Sheathing	per roll, 400 sq. ft. 0 40
Tar	" 400 " 0 55
Dry Fibre	" 400 " 0 75
Tarred Fibre	" 400 " 0 70
O. K. & I. X. L.	" 400 " 0 70
Resin-sized	" 400 " 0 45
Oiled Sheathing	" 600 " 1 00
Oiled	" 400 " 0 70
Roof Coating, in barrels	per gal. 0 17
Roof small packages	0 25
Refined Tar	per barrel 5 00
Coal Tar	per gal. 4 00
Coal Tar, less than barrels	per gal. 0 15
Roofing Pitch	per 100 lb. 1 00

BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.9	or 2-inch.
---------------------------------------	------------

BUTTS.

Wrought Brass, net revised list.	
Cast Iron.	
Loose Pin, discount 60 per cent.	

Wrought Steel.

Fast Joint, discount 65, 10 and 2½ per cent.	
Loose Pin, discount 65, 10 and 2½ per cent.	
Berlin Bronzed, discount 70, 70 and 5 per cent.	
Gen. B ronzed	per pair 0 40
	0 65

CARPET STRETCHERS.

American	per doz.	1 00
Bullard's	"	6 50

CASTORS.

Bed, new list, discount 55 to 57½ per cent.	
Plate, discount 52½ to 57½ per cent.	

CATTLE LEADERS.

Nos. 32 and 33	per gross	7 50
		8 50

CHALK.

Carpenters' Colored, per gross	0 45
White lump	per cwt. 0 60
Red	0 05
Crayon	per gross 0 14
	0 18

CHISELS.

Socket, Framing and Firmer.	
Broad's, discount 60 and 10 per cent.	
Warnock's, discount 50 and 10 per cent.	
P. S. & W. Extra, discount 60 and 10 per cent.	

FOODS—STOCK.

Colonial Stock Foods, 50c. packages,	per doz \$1 00
" " " 25c. pkgs.,	2 00
" " " 10c.	75
" " " 25-lb. pail, each	1 80
Poultry Foods, 25c. packages	1 25
Cough Powders, per doz	1 25
Worm	1 25
International Stock Foods, \$1 packages,	per doz 8 00
International Stock Foods, per pail	2 15
" " " per bbl.	10 50
" " " Poultry \$1 pkgs. per doz.	8 00
" " " Worm Powders, 50c. pkgs.	4 00
" " " Pine Healing Oil, per doz	8 00
" " " Pheno-Chloro, \$1 pkgs. per doz	8 00
" " " Hoof Ointment	8 00
" " " Compound Absorbent	16 00
Also 25c. pkgs. at \$2 per doz.	50c. pkgs. at 4 per doz.

CLIPS.

Axis, discount 65 per cent.	
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EASY TO PUT ON HARD TO WEAR OUT

Aptly describes two of the many advantages possessed by Paterson's Wire Edged Ready Roofing, the only popular substitute for Shingles.

The Paterson Mfg. Co., Limited

Toronto and Montreal.

COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

CONDUCTOR PIPE.

Plain or Corrugated.

2-inch	per 100 feet	3 00
3 "	"	4 00
4 "	"	5 25
5 "	"	6 75
6 "	"	9 00

CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

CROSSCUT SAW HANDLES.

S. & D., No. 3	per pair	0 17½
S. & D., " 5	"	0 22½
S. & D., " 6	"	0 15
Boynton pattern	"	0 20

DOOR SPRINGS.

Torrey's Rod	per doz.	1 75
Coil, 9 to 11 in.	"	0 95
English	"	2 00

DRAW KNIVES.

Oo and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

DRILLS.

Hand and Breast.

Miller's Falls, per doz., net list.

DRILL BITS.

Forse, discount 37½ to 40 per cent.

Standard, discount 50 and 5 to 55 per cent.

FAUCETS.

Common, cork-lined, discount 35 per cent.

EAVETROUGHS.

10-inch per 100 ft. 10 00

ELBOWS (stovepipe.)

5 and 6-inch, common	per doz.	1 20
7-inch	"	1 35
Polished, 15c. per dozen extra.	"	

ESCUTCHEONS.

Discount 50 and 10 per cent., new list

ESCUTCHEON PINS.

Iron, discount 40 per cent.

FACTORY MILK CANS.

Discount off revised list, 40 per cent.

FILES AND RASPS.

Great Western	.70 and 10 per cent.
Acadia	.70 " 10 "
Kearney & Foot	.70 " 10 "
Diaston's	.70 " 10 "
American	.70 " 10 "
J. Barton Smith	.70 " 10 "
McClellan	.70 " 10 "
Eagle	.70 " 10 "
Royal	.80 " 10 and 5 "
Globe	.70 to 75 "
Black Diamond	.60 and 10 to 60, 10 and 5 per cent.
Jowitt's, English list	25 to 27½ per cent.
Nicholson File Co.'s "Simplicity" file handle,	per gross 85c. to \$1.50

GLASS. Box Price.

Size United Inches.	Star 50 ft.	Per 100 ft.	D. Diamond Per 50 ft.	Per 100 ft.
Under 26	3 80	5 06		
26 to 40	4 00	5 44		
41 to 50	4 50	6 56		
51 to 60	4 75	7 50		
61 to 70	5 00	8 62		
71 to 80	5 30	9 38		
81 to 85		10 75		
86 to 90		12 30		
91 to 95		15 00		
96 to 100		18 00		
Discount 15 per cent				

GAUGES.

Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

Wire Gauges.

Winn's, Nos. 26 to 33 each 1 65 2 40

GILLETTS' POWDERED LYE.

1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.

HALTERS.

Rope, ½-inch	per gross	12 00
Rope, ¾-inch	"	9 00
Rope, 1-inch	"	14 00
Leather, 1-inch	per doz.	4 00
Leather, 1½-inch	"	5 20
Web	"	2 45

HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

Tack.

Magnetic per doz. 1 10 1 20

Sledge.

Canadian per lb. 0 07½ 0 08½

Ball Pean.

English and Canadian, per lb. 0 22 0 25

HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00

Sore door, per doz. 1 00 1 50

Fork.

C. & B., discount 40 per cent., revised list.

Hoe.

C. & B., discount 40 per cent., revised list.

Saw.

American per doz. 1 00 1 25

Plane.

American per gross 3 15 3 75

Hammer and Hatchet.

Canadian, discount 40 per cent.

HANGERS.

Steel barn door	8 00	10 00
Stearns, 4-inch	4 50	6 00
5-inch	6 00	9 00
Zenith	6 00	9 00
Lane's covered—		
No. 11, 5-foot run	8 40	
No. 11½, 10-foot run	10 80	
No. 12, 10-foot run	12 60	
No. 14, 15-foot run	21 00	
Steel, covered	4 00	11 00
track, 1 x 3-16 in (100 ft)	3 75	
1½ x 3-16 in (100 ft)	4 75	

HARVEST TOOLS.

Discount 60 per cent.

HATCHETS.

Canadian, discount 40 to 42½ per cent.	
Shingle, Red Ridge 1, per doz.	4 40
" 2,	4 85
Barrel, Underhill	5 00

HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. 0 06½

" 5-in., " 0 06½

" 6-in., " 0 06

" 8-in., " 0 05½

" 10-in., " 0 05½

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in. per 100 lb. 4 50

12 in. up. 3 25

Spring, No. 20, per doz. pairs 10 50

HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter, per doz. 4 00 4 50

HOLLOW WARE.

Tinned cast, 35 per cent.

HOOKS.

Cast Iron.

d oage per doz. 0 50 10

Clothes line, No. 61.. " 0 00 0 70

Harness..... " 0 60 12 00

Hat and coat..... per gro. 1 10 10 00

Chandelier..... per doz. 0 50 1 00

Wrought Iron.

Wrought hooks and staples Canadian discount 60 per cent.

Wire.

Hat and coat, discount 60 per cent.

Belt..... per 1,000 0 60

Screw, bright, discount 60 per cent.

HORSE NAILS.

"C" brand, 40, 10 and 7½ per cent. off list { Oval head

"M" brand, 55, per cent.

Countersunk, 57½ per cent.

"Monarch," 50 and 7½ per cent.

"Peerless," 50 per cent. dis.

HORSESHOES.

F.O.B. Montreal

Iron Shoes.

Light, medium and heavy..... 3 65 3 90

Snow shoes..... 3 90 4 15

Steel Shoes.

XL, sizes 1 to 5..... 5 35

Light, No. 2 and larger..... 3 80

No. 1 and smaller..... 4 05

Featherweight, all sizes 0 to 4..... 5 35

Toeweight, all sizes 1 to 4..... 6 60

JAPANNED WARE.

Discount 50 per cent.

ICE PICKS.

Star..... per doz. 00 3 25

KETTLES.

Brass spun 7½ per cent. discount off new list.

Copper..... per lb. 0 30 0 50

American, 60 and 10 to 65 and 5 per cent.

KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,

American..... per gross 0 60

KNOBBS.

Door, japanned and N.P., per

doz. 1 50 2 50

Bronze, Berlin..... per doz. 2 75 3 25

Bronze, Genuine..... 6 00 9 00

Shutter, porcelain, F. & L.

screw..... per gross 1 30 00

White door knobs..... per doz. 2 00

LAMP WICKS.

Net prices.

Discount, 60 per cent.

LANTERNS.

Cold Blast..... per doz. 7 00

No. 3, "Wright's"..... 8 50

Ordinary, with O burner..... 4 00

Dashboard, cold blast..... 9 00

No. 0..... 5 75

Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.

Porcelain lined..... per doz. 2 20 5 60

Galvanized..... 1 87 3 85

King, wood..... 2 75 2 90

King, glass..... 4 00 4 50

All glass..... 0 50 0 90

LINE'S.

Fish..... per gross 1 05 2 50

Chalk..... 1 90 7 40

LAWN MOWERS.

Woodyatt, 10½-in. wheel, 14-in. cut... \$ 50

Star, 9-in. " " 7 00

Daisy, 8-in. " " (net) 2 87½

Philadelphia, 7½-in. " " 7 00

Ontario, 7½-in. " " 15 80

King Edw'd, 12-in. " " 9 50

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:

10½-in. high wheel..... 7 50 10 00

9-in. " " 5 50 6 25

8-in. " " 4 90 5 50

Discount 50 per cent.

LOCKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwin..... per doz.

Cabinet.

Eagle, discount 30 per cent.

Padlocks.

English and Am..... per doz. 0 50 6 00

Eagle, discount 20 to 25 per cent.

MACHINE SCREWS.

Iron and Brass.

Flat head, discount 25 per cent.

Round head, discount 20 per cent.

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Tinsmiths'..... per doz. 1 25 1 50

Carpenters', hickory, " 1 25 3 75

Lignum Vitae..... " 3 85 5 00

Caulking, each..... 0 60 2 00

MATTOCKS.

Canadian..... per doz. 5 50 6 00

MEAT CUTTERS.

American, discount 3½ per cent.

German, 15 per cen

Gem..... each 1 15

MILK CAN TRIMMING.

Discount 25 per cent.

NAILS.

2d and 3d..... Cut. 3 30 Wire. 3 45

3d..... 2 95 3 12

4 and 5d..... 2 70 2 95

6 and 7d..... 2 60 2 80

8 and 9d..... 2 45 2 60

10 and 12d..... 2 40 2 55

16 and 20d..... 2 35 2 50

30, 40, 50 and 60d (base)..... 2 30 2 45

Cut nails in carlots 5c. less.

Wire nails in carlots are \$2.40.

Steel cut

The New U.M.C. 33 Primers

give an added ballistic value to the powder and shot charges in all U. M. C. smokeless powder shells.

THE NO. 3 U. M. C. PRIMERS

were the first and best primers for smokeless powder ever made here or abroad—until the advent of the new U.M.C. 33 primers, which were substituted for them some time ago.

The U.M.C. Southern Squad used shells primed with the new 33 primers.

The Union Metallic Cartridge Co.

Agency, 313 Broadway, New York, N.Y.

Factory, BRIDGEPORT, CONN.

PLANE IRONS.		SAP SPOUTS.		STAPLES.		ENAMELLED WARE.	
English	per doz. 2 00 5 00	Bronzed iron with hooks	per 1,000 7 50	Galvanized	3 00	White, Princess, Turquoise, Blue and White	discount 50 per cent.
PLIERS AND NIPPERS.		"Eureka" tinned steel, hooks	8 00	Plain	2 80	Diamond, Famous, Premier, discount 50 and	10 per cent.
Button's genuine, per doz. pairs, discount		SAWS.		Coopers, discount 45 per cent.		Granite or Pearl, Imperial, Crescent, discount	50, 10 and 10 per cent.
37 1/2 to 40 per cent.		Hand, Diaston's, discount 12 1/2 per cent		Poultry netting staples, discount 40 per cent.		Premier steel ware, 40 per cent.	
Button's imitation, per doz.	5 00 9 00	S. & D., discount 40 per cent.		STOCKS AND DIEN.		"Star" decorated steel and decorated white,	25 per cent.
German	0 60 60	Crosscut, Diaston's, per foot 0 35 0 55		American discount 25 per cent.		WIRE.	
PRESSED SPIKES.		S. & D., discount 35 per cent. on Nos. 2 and 3.		STONE.		Smooth Steel Wire.	
Discount 20 per cent.		Hack, complete, each 0 75 2 75		Washita	per lb. 0 28 0 60	No. 0-9 gauge.	\$2 50
PULLEYS.		Hack, frame only, each 0 50 1 25		Hindustan	0 06 0 07	10 "	6c. extra.
Hothouse	per doz. 0 55 1 00	SASH WEIGHTS.		Labrador	0 09 0 13	11 "	12c.
Axle	0 22 0 33	Sectional	per 100 lb. 2 00 2 25	Turkey	0 10 0 30	12 "	20c.
Screw	0 27 1 00	Solid	1 50 1 75	Arkansas	1 50 5 00	13 "	30c.
Awning	0 35 2 50	SASH CORD.		Water-of-Ayr	0 10 0 10	14 "	40c.
PUMPS.		Per lb.	0 28 0 30	Scythe	per gross 3 50 5 00	15 "	55c.
Canadian cistern	1 80 3 60	SAW SETS.		Grind, 2-in., 40 to 200 lb., per ton	25 00 28 00	16 "	70c.
Canadian pitcher spout	1 40 2 10	Lincoln and Whiting	per doz. 4 75	" under 40 lb., "	28 00 29 00	ADD 60c. for coppering and \$2 for tinning.	
PUNCHES.		Hand Sets, Perfect	4 00	" under 2 in. thick, "	29 00	Extra net per 100 lb.—Oiled wire 10c.,	
Saddler's	per doz. 1 00 1 85	X-Cut Sets,	7 50	STOVEPIPES.		spring wire \$1.25, special hay baling wire 30c.,	
Conductor's	3 00 15 00	SCALES.		5 and 6 inch, per 100 lengths	7 00	best steel wire 75c., bright soft drawn 15c.,	
Finners, solid	per set 0 72	Gurney Standard, 40 per cent.		7 inch	7 50	charcoal (extra quality) \$1.25, packed in casks	
" hollow	per inch 1 00	Gurney Champion, 50 per cent.		ENAMELINE STOVE POLISH.		or cases 15c., baling and papering 10c., 50	
RAZORS.		Burrow, Stewart & Milne		No. 4, 3 doz. in case, net cash	4 80	and 100-lb. bundles 10c., in 25-lb. bundles	
Wood	per doz. net 1 20 up	Imperial Standard, discount 40 per cent.		No. 6, 3 doz. in case, "	8 40	15c., in 5 and 10-lb. bundles 25c., in 1-lb.	
RAZORS.		Weight Beams, discount 35 per cent.		TACKS, BRADS, ETC.		hanks, 50c., in 1-lb. hanks 75c., in 1-lb.	
Elliot's	4 00 18 00	Champion Scales, discount 50 per cent.		Carpet tacks, blued	80 and 15	hanks \$1.	
Geo. Butler's & Co.'s	4 00 18 00	Fairbanks standard, discount 35 per cent.		" " (in kegs)	40 and 20	Fine Steel Wire, discount 25 per cent.	
Boker's	7 50 11 00	" Dominion, discount 55 per cent.		Cut tacks, blued, in dozens only	60	List of extras: In 100-lb. lots: No. 17,	
" King Cutter	12 50 15 00	Richelieu, discount 55 per cent.		" 1/2 weights	60	\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—	
Wade & Butcher's	3 60 10 00	Warren's new Standard, discount 40 per cent.		Swedes cut tacks, blued and tinned	80 and 10	No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No.	
Theile & Quack's	7 00 12 00	" Champion, discount 50 per cent.		In bulk	80 and 10	24, \$8—No. 25, \$9—No. 26, \$9.50—No. 27,	
Carbo Magnetic	15 00	" Weightbeams, discount 35 per cent.		" brush, blued and tinned	70	10—No. 28, \$11—No. 29, \$12—No. 30, \$13—	
Griffon Barber's Favorite	10 75	Sargent's	per doz. 0 65 1 00	Swedes, gimp, blued, tinned and	75 and 12 1/2	No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,	
Griffon No. 65	13 00	SCREEN DOORS.		japaned	75 and 12 1/2	\$17. Extras net—tinned wire, Nos. 17-25,	
Griffon Safety Razors	13 50	Common doors, 2 or 3 panel, walnut		Zinc tacks	35	\$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,	
Griffon Stropping Machines	13 50	stained, 4-in. style	per doz. 6 50	Leather carpet tacks	55	5c.—oiling, 10c.—in 25-lb. bundles, 15c.—in 5	
Lewis Bros. "Klean Kutter"	8 50 10 50	Common doors, 2 or 3 panel, yellow and		Copper tacks	50	and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.	
Clauss, 50 and 10 per cent.		green stained, 4-in. style	per doz. 6 75	Copper nails	52 1/2	—in 1-lb. hanks, 38c.—in 1-lb. hanks, 50c.—	
Clauss Strops, 50 and 10 per cent.		Common doors, 2 or 3 panel, in natural		Trunk nails, blued	65 and 5	packed in casks or cases, 15c.—bagging or	
REGISTERS.		colors, oil finish	per doz. 8 75	Trunk nails, tinned	65 and 10	papering, 10c.	
Discount 40 per cent.		3-in. style 20c. per dozen less.		Clout nails, blued	65 and 5	Brass wire, discount 50 per cent. off the list.	
RIVETS AND BURRS.		SCREWS.		Chair nails	35	Copper wire, discount 60 per cent. net cash	
Iron Rivets, black and tinned, 60 and 10 p. c.		Wood, F. H., bright and steel, discount 87 1/2		Patent brads	40	30 days, f.o.b. factory.	
Iron Burrs, discount 55 per cent.		per cent.		Fine finishing	40	Galvanized wire, per 100 lb.—Nos. 4 and 5,	
Extras on Iron Rivets in 1-lb. cartons, 1c.		Wood, K. H., bright, dis. 82 1/2 per cent.		Lining tacks, in papers	10	\$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.16	
per lb.		" F. H., brass, dis. 80 per cent.		" in bulk	15	—No. 9, \$2.55—No. 10, \$3.20 to \$3.20	
Extras on Iron Rivets in 1-lb. cartons, 1c.		" R. H., dis. 75 per cent.		" solid heads, in bulk	75	—No. 11, \$3.25 to \$3.25—No. 12, \$2.8	
per lb.		" F. H., bronze, dis. 75 per cent.		Saddle nails, in papers	15	—No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.	
Copper Rivets, with usual proportion burrs, 45		" R. H., dis. 70 per cent.		" in bulk	15	15, \$4.30—No. 16, \$4.30. Base sizes, Nos.	
per cent. Cartons, 1c. per lb. extra, net.		Drive Screws, dis. 87 1/2 per cent.		Tufting buttons, 22 line, in doz-	60	6 to 9, \$2.27 1/2 f.o.b. Cleveland. In carlots	
Copper Burrs only, discount 30 and 10 per cent.		Bench, wood	per doz. 3 25 4 00	ens only	60	12c. less.	
Extras on Tinned or Coppered Rivets, 1-lb.		" iron	4 25 5 00	Zinc glaziers' points	50 and 10	Clothes Line Wire, regular 7 strand, No. 17,	
cartons, 1c. per lb.		Set, case hardened, dis. 60 per cent.		Double pointed tacks, papers	90 and 10	\$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow	
RIVET SETS.		Square Cap, dis. 50 and 5 per cent.		" bulk	40	6 strand, No. 17, \$4.30; No. 18, \$2.70; No.	
Canadian, discount 35 to 37 1/2 per cent.		Hexagon Cap, dis. 45 per cent.		Clinch and duck rivets	45	19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,	
ROPE, ETC.		SOYTHES.		TAPE LINES.		Toronto, Montreal.	
Sisal	0 11 1/2	Per doz. net	6 00 9 00	English, ass skin	per doz. 2 75 5 00	WIRE FENCING.	
Pure Manila	0 14 1/2	SOYTHE SNATHS.		English, Patent Leather	5 50 9 75	Galvanized barb	2 75
"British" Manila	0 12	Canadian, discount 40 per cent.		Chestman's	each 0 90 2 85	Galvanized, plain twist	2 75
Cotton, 3-16 inch and larger	0 20 0 22	SHARPERS.		" steel	each 0 80 8 00	Galvanized barb, f.o.b. Cleveland, \$2 55 1/2 in	
" 5-32 inch	0 25 0 27	Clauss, nickel, discount 80 per cent.		TINNERS' SNIPS.		less than carlots, and \$2 45 in carlots.	
" 4 inch	0 25 0 28	Clauss, Japan, discount 67 1/2 per cent.		Per doz.	3 00 15 00	COILED SPRING WIRE.	
Russia Deep Sea	0 16	Clauss, tailors, discount 40 per cent.		Clauss, discount 35 per cent.		High Carbon, No. 9	\$2 70
Jute	0 09	Seymour's, discount 50 and 10 per cent.		Tin case and dairy, 75 to 75 and 10 per cent.		" No. 11	3 30
Lath Yarn, single	0 10	SHOVELS AND SPADES.		TRAPS (steel.)		" No. 12	2 95
" double	0 10 1/2	Canadian, discount 45 per cent.		Game, Newhouse, discount 25 per cent.		WIRE CLOTH.	
Sisal bed cord, 48 feet	per doz. 0 65	SINES.		Game, H. & N., P. S. & W., 65 per cent.		Painted Screen, per 100 sq. ft., net.	1 50
" 60 feet	0 80	Castiron, 16 x 24	0 85	Game, steel, 72 1/2, 75 per cent.		Terms, 2 per cent. off 30 days.	
" 72 feet	0 95	" 18 x 30	1 00	TROWELS.		WASHING MACHINES.	
RULES.		" 18 x 36	1 40	Diaston's, discount 10 per cent.		Round, re-acting, per doz.	56 00
Boxwood, discount 55 per cent.		SNAPS.		German	per doz. 4 75 6 00	Square	59 00
Ivory, discount 37 1/2 to 40 per cent.		Harness, German, discount 25 per cent.		S. & D., discount 35 per cent.		Eclipse, per doz	48 00
SAD IRONS.		Lock, Andrews	4 50 11 50	TWINES.		Dowdell	36 00
Mrs. Potts, No. 55, polished	per set 0 80	SOLDERING IRONS.		Bag, Russian	per lb. 0 27	New Century, per doz	72 00
No. 50, nickel-plated,	0 90	1, 1 1/2-lb.	per lb. 0 37	Wrapping, cotton, 3-ply	0 24	Connor Improved	33 00
Common, plain	4 50	2-lb. or over	0 34	" 4-ply	0 27	Daisy	48 00
" plated	5 50	SQUARES.		Mattress	per lb. 0 33 0 45	WRINGERS.	
SAND AND EMERY PAPER.		Iron, No. 493	per doz. 2 40 2 55	Staging	0 27 0 35	Leader	per doz. 30 00 33 00
B. & A. sand, discount, 40 and 5 per cent		No. 494	3 25 3 40	VISES.		Royal Canadian	24 00
Emery, discount 40 per cent.		Steel, discount 60 to 60 and 5 per cent.		Pipe Vise, Hinge, No. 1	3 50	Royal American	24 00
Emery (Rutten's), 5 to 10 per cent. advance		Try and Bevel, discount 50 to 52 1/2 per cent.		Saw Vise	4 50 9 00	Sampson	24 00
on list		STAMPED WARE.		COLUMBIA HARDWARE CO.		Lightning	27 00
		Plain, discount 75 and 12 1/2 per cent. off re-		Blacksmith's (discount) 60 per cent.		Terms, 4 months, or 3 per cent. 30 days.	
		vised list.		" parallel (discount) 45 per cent.		WROUGHT IRON WASHERS.	
		Retinned, discount 75 per cent. off revised list.				Canadian make, discount 40 per cent	

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TECHNICAL PUBLICATIONS.

PRACTICAL CARRIAGE AND WAGGON PAINTING.

ATREATISE on the painting of carriages, wagons and sleighs, embracing full and explicit directions for executing all kinds of work, by M. C. Hilliek; cloth binding, illustrated, 9 1/2x6; published by The Western Painter, Chicago.

This is the third edition of this work, which fact says something for its popularity.

Commercial conditions have of late years so shaped themselves that the painter, to successfully conduct a painting business, must of necessity study the science of the business quite as thoroughly as he does the science of paint structures and developing color effects. The contents of this work may be summed up under the following heads: The shop and its equipment; buying, using and preserving brushes; the surfacing stage of painting; colors; the application of colors to surfaces; varnish, and the marvelous thing about it; depravities of varnish; striping and its purpose; scroll painting; lettering; monograms; painting the modern business wagon; repainting and revarnishing vehicles; a practical study of materials;

painting cutters and sleighs; facts and formulas from the paint shop diary.

This should be a book of immense value to carriage and wagon painters, and there are chapters that would also prove very interesting to all painters.

THE MODERN WOOD FINISHER

A practical treatise on wood finishing in all its branches, including tools and materials employed, preparation of surfaces, stains and staining, fillers and filling, shellacking, varnishes and varnishing, rubbing, polishing, oil polishing, wax polishing, oil polishing, etc., by F. Maire, formerly editor of "Painting and Decorating"; paper cover, 7 1/2x5; illustrated; price 50c; published by the Western Painter, Chicago.

The employment of hardwoods in the interior construction of modern dwellings has become so common of late years, especially since the best quality of white pine has become scarce and costs very nearly as much for finishing as many kinds of hardwood do, the only item of saving being its greater ease of working by the joiner, that there are few houses being constructed now, wherein hardwood is not used at least for the so-called best rooms. It is therefore necessary that house painters or

house contractors have a knowledge of how hardwoods should be finished.

NICKEL REFINING AT SUDBURY.

THE International Nickel Co., which controls the operations of the nickel and copper deposits at Sudbury, Copper Cliff and Constable Head, is about to establish a copper refining plant by which the output of their own mines and smelters can be refined in Canada instead of being sent to the United States as at present.

A boom is promised in the Town of Sudbury through the remarkable development of the Creighton copper and nickel mine, which is making a splendid showing. They have over 4,000,000 tons of ore in sight, which will average seven per cent. of copper and nickel.

The additional smelting plant consists of two large blast furnaces each having a capacity of 500 tons of copper ore daily and a 1,000 ton smelter. The matte from the furnaces is treated in Bessemer converters of which there are three stands, and by this process the matte is brought up to a standard of eighty per cent. of nickel and copper.

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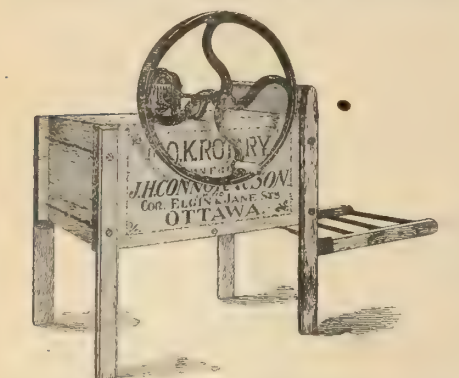
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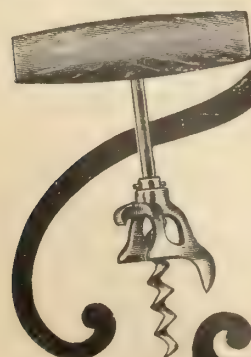
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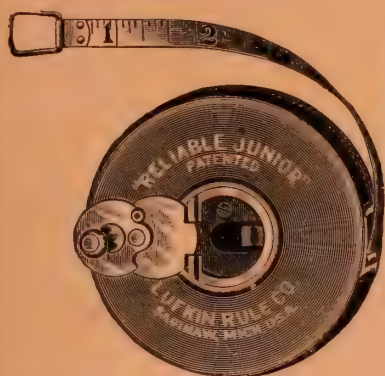
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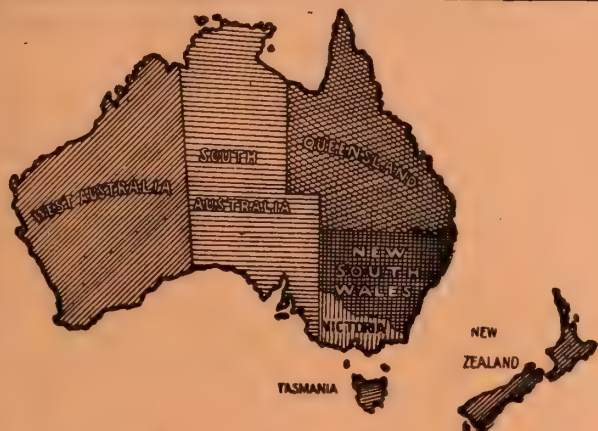
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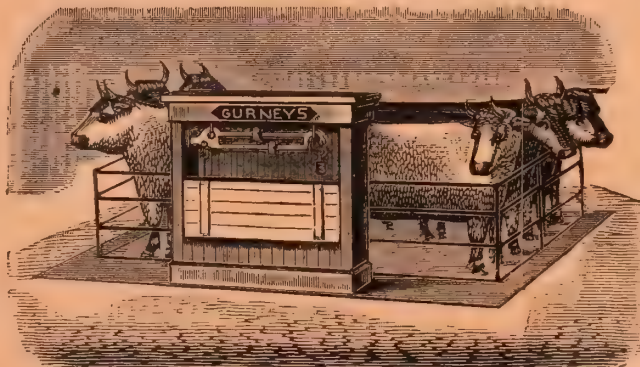
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VOL. XVI.

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Kept in stock. Can ship at a moment's notice. Order from your jobber, or address direct, and we shall see that your order is filled.



Taylor-Forbes Company,

LIMITED.

Montreal Branch :
 9 De Bresoles St.

~~~~~ GUELPH, CANADA.

THE LARGEST MANUFACTURERS OF HARDWARE IN CANADA.

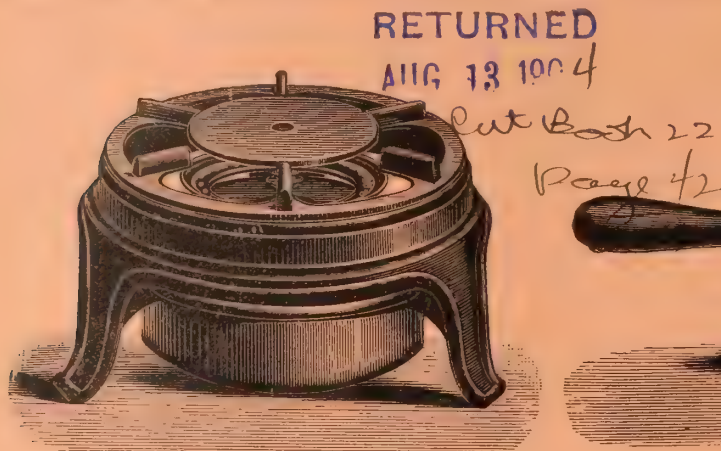


# SPIRIT STOVES

The "Fix" Safety Stove is the best, most convenient and cleanest Spirit Stove.

The "Fix" is absolutely secure from explosion or danger of fire.

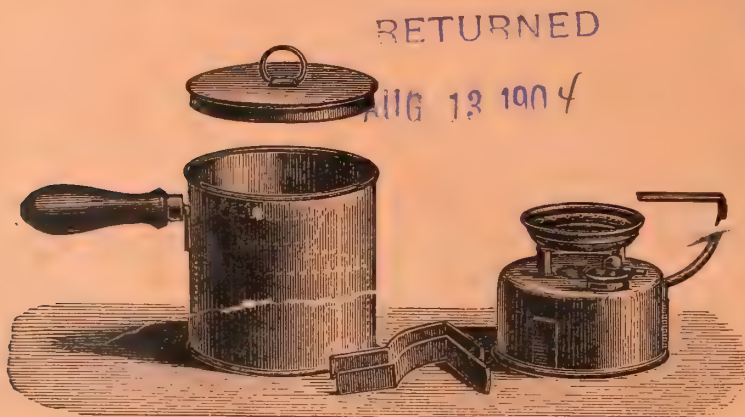
The "Fix" is the quickest boiler, is easily lit and more economical than any other Spirit Stove made.



No. 6. SPIRIT STOVE STAND.



No. 5. SPIRIT STOVE, WITH TIN BOILER.



No. 4. SPIRIT STOVE, WITH TIN BOILER.



No. 1 & 1B.  
SPIRIT STOVE.



No. 2 & 3.  
SPIRIT STOVE.

WOOD ALCOHOL IN BOTTLES AND CANS.

WRITE FOR TRADE PRICES.

**RICE LEWIS & SON**  
LIMITED  
**TORONTO.**



**ALWAYS  
READY  
FOR USE**



Full Hollow  
Ground \$2.50 Each  
Double Concave for  
extra hard beards, \$3.00

Send for free book, "HINTS TO SHAVERS."

The **CARBO MAGNETIC** RAZOR

**No Honing! No Grinding!**

No Smarting after Shaving. With ordinary careful use will

**KEEP AN EDGE FOR YEARS WITHOUT HONING.**

Booklet coming—if you will ask for a copy, with trade discount.

FOR SALE BY LEADING JOBBERS.

FIRM OF  
**A. L. SILBERSTEIN,** *Griffon* Cutlery  
MAKERS OF

459-461 BROADWAY, NEW YORK.

## The Canadian Rubber Co. of Montreal.

MANUFACTURERS OF

**Rubber Belting,  
Hose, Packing,  
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ETC., ETC.

We make a specialty of

**HORSE SHOE PADS**

the best in the market.

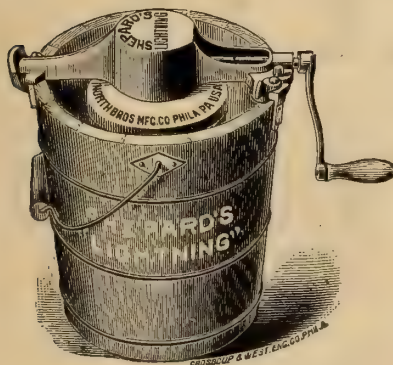
**Write for Prices and Circulars.**

**Head Office : : MONTREAL**

BRANCHES—TORONTO, WINNIPEG and VANCOUVER

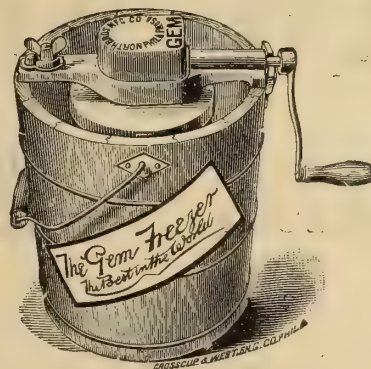
**Lightning, Gem  
Blizzard . . .**

# FREEZERS



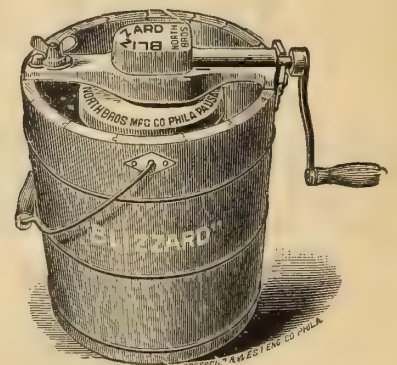
**ARE**

Well Advertised.  
In Demand.  
Easily Sold.  
Satisfactory in Use.  
Of Known Reputation.



**HAVE**

Cedar Pails with Electric Welded Wire Hoops.  
Cans of Heavy Tin with Drawn Steel Bottoms.  
AUTOMATIC Twin Scrapers.  
"The Ice Cream Freezer Book" tells all about  
these and our other Freezers, mailed free.



**EXCEL IN**

Easy Running.  
Quick Freezing.  
Economy.  
Convenience.  
Practical Results.

**North Bros. Mfg. Co., Philadelphia, Pa.,**  
U. S. A.



**THOS. BIRKETT & SON CO.,**

LIMITED

Wholesale Hardware Merchants,

**OTTAWA, ONT.**

In introducing

**The  
Universal  
Bread  
Maker**

we do so with confidence,  
knowing it will do all that  
is said of it.

To mix and knead  
bread in **3** minutes may  
seem extravagant, but it  
is a fact

Here is a

**MIXER, KNEADER and RAISER  
ALL IN ONE.**

The old and disagreeable task of Bread-making is done away with.

We shall be pleased to send booklets for your customers, and give prompt  
attention to your sample order.

**RUSSWIN  
FOOD CUTTERS**

**EASE  
OF OPERATION**

is one of the many advantages  
of the Russwin Food Cutter.  
It CUTS—does not tear, grind or  
mash. Knives are self-sharpen-  
ing—easily adapted to cut  
coarse, cut fine, or pulverize.  
Try it. For sale everywhere.  
Made by

**RUSSELL & ERWIN MFG. CO.**  
NEW BRITAIN, CONN.

—FOR SALE BY—

**The KENNEDY HARDWARE CO., Limited**

**49 Colborne St., TORONTO, ONT.**

# COPPER SHEETS

**Hot and Cold Rolled.**

**Plain and Tinned.**

**Write for Stock List and Prices.**

**M. & L. Samuel, Benjamin & Co.**

**503 Temple Building**

**- TORONTO.**

English House—16 Philpot Lane, LONDON, ENGLAND.



A Short Story—quickly told :

# DISSTON'S FILES

## ARE BEST

Not best, "just because," but best by virtue of carefully selected tough steel of high grade, sharp and well-formed teeth, thorough hardening and careful inspection at every stage of their manufacture.

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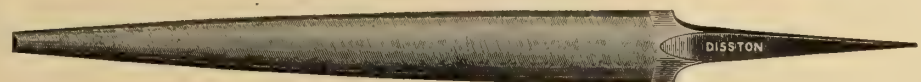
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Out Bosh 22  
Page 40  
emo.

Of all tools known there are none used for so many purposes, and of so many styles and kinds as files. The mechanic wants the best and **DISSTON'S** always suits him. We carry a full line of regular styles and sizes.

QUOTE  
LOW

# LEWIS BROS. & CO.

SHIP  
QUICK

IMPORTERS AND DISTRIBUTERS.

Address all Correspondence to

TORONTO,  
87 York St.

OTTAWA,  
54 Queen St.

VANCOUVER,  
141 Water St.

# MONTREAL





## Just like fishing

Building up trade is just like fishing.

If you use the right kind of bait and cast your line where the kind of fish you want are most plentiful, you'll quite likely get a number of bites.

Then if you go about it right you are pretty sure to land most of them.

Apply the illustration to business.

If you want to catch the hardware trade, cast your line where all the good hardwaremen in Canada congregate every week—looking for bait to build up their businesses with—in **HARDWARE AND METAL**. But

Suppose results don't come at first

What be yew goin' tur dew?

Take out yewr ad, and kick yewrself,

An' goster feelin' blew?

Uv course yew hain't; yew're goin' tew fish,

An' bait an' bait again;

Bimeby some nibbles 'n bites 'll come,

Then yew'll pull 'em in.

Our Department of Advertising Service is now providing good bait for a number of our advertisers—and stands ready to help a few more in this connection.

Drop us a line about it.

## Hardware and Metal

10 Front St. E.  
Toronto.

232 McGill St.  
Montreal



Department of Advertising Service

Our Works are not in Manchuria; they are in England, on the banks of the Manchester Ship Canal. We can often give better deliveries than works 100 miles from you; the reason—we carry **STOCK** of Cap and Set Screws, Finished and Semi-finished Nuts, and don't usually have to stop to make 'em; prices too, are right.

## THE ACME LATHE & PRODUCTS CO., LTD.

TRAFFORD PARK, MANCHESTER, ENGLAND

## GLAZIERS' DIAMONDS

Sharratt & Newth

43 and 44 Percival Street, - London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

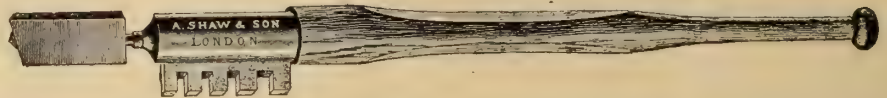
Established 1815

ALSO  
Lead Vices,  
Carbon Tools,  
Etc., Etc.,



Agents for Canada: **A. Ramsay & Son, Montreal**

## GLAZIERS' DIAMONDS



Ahead of all others in quality and workmanship. If sparkes of fine quality, set by **experts**, are what you require, buy Diamonds of **A. Shaw & Son's** make.

Canadian Agent

**GODFREY S. PELTON**

388 ST. PAUL ST., MONTREAL

HAND  
FORGED

**CLAUSS BRAND.**

BEST  
MATERIAL

The word **Clauss** stamped on an article means that it is good.



We warrant **Clauss** goods to be better than the best.  
Write for Catalogue and latest discounts.

**I. A. TOBIAS, THE CLAUSS SHEAR CO.,**  
Canadian Agent. 169 Spadina Ave., Toronto, Ont.

CELEBRATED

## HEINISCH SHEARS

Tailors' Shears,  
Trimmers' Shears,  
Tinnern' Snips, etc.



ACKNOWLEDGED THE BEST.

**R. HEINISCH'S SONS CO.**

NEW YORK OFFICE, 155 Chambers St.  
NEWARK, N.J., U.S.A.

HENRY T.  
SEYMOUR  
SHEAR CO.  
NEW YORK.

## SEYMOUR SHEARS

HAVE BEEN THE

Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



TRADE MARK

Latest Catalogue will be sent in exchange for your business card.

Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

**Henry T. Seymour Shear Company.**

WIEBUSCH & HILGER, Limited, NEW YORK, Sole Agents.





## ONEIDA COMMUNITY'S WELDLESS COW TIES.

Illustration shows

AMERICAN FLAT LINK "THREE CHAIN" TYPE

Also made in "CLOSED RING," "OPEN RING"  
and "DOMINION" (or "SHORT") TYPES.

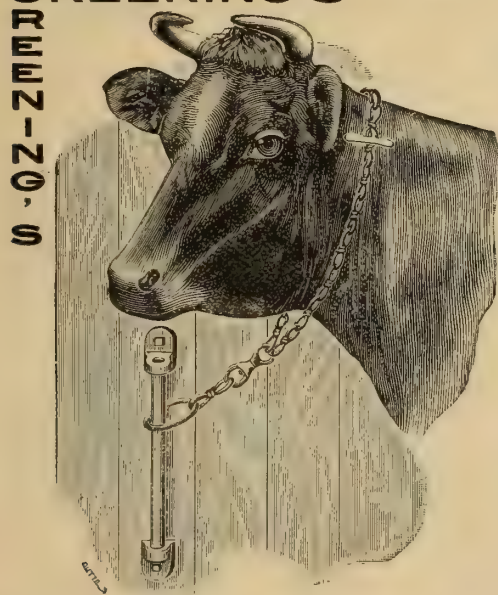
Oneida Community Cow Ties can be had of all the leading jobbers.  
We invite correspondence where any difficulty is experienced in  
obtaining our goods.

Write for New Catalogue.

Address

**ONEIDA COMMUNITY, Limited.**  
NIAGARA FALLS, ONT.

GREENING'S



## PATENT COW TIES.

These Cow Ties  
have stood the  
test for years.  
Undoubtedly the  
best and strong-  
est on the mar-  
ket.

It will pay to handle only the best.

A complete line of all sizes ready for shipment.

For Sale by all Jobbers.

**THE B. GREENING WIRE CO.,**  
LIMITED  
Hamilton, Ont. Montreal, Que



"A friend in need  
is a friend indeed."

It is astonishing how "friendly"

## Gillett's Lye

is. It has a hundred and one different uses in every  
home. It fills needs that nothing else will or can.

Therefore it is a fine line for every hardware  
dealer to keep prominent.

**E. W. GILLETT COMPANY LIMITED**  
TORONTO

## STEEL WIRE NAILS

FOR ALL PURPOSES.

A large quantity of

STANDARD SIZES in Stock

WOOD SCREWS,  
BRIGHT WIRE GOODS,  
WIRE STAPLES.

**WIRE** OF ALL KINDS  
AND  
FOR ALL PURPOSES.

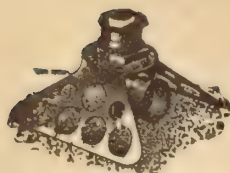
COPPER WIRE

for  
TROLLEY - TELEGRAPH - TELEPHONE  
and  
TRANSMISSION LINES

Manufactured by

**DOMINION WIRE MFG. CO.**  
LIMITED  
MONTREAL and TORONTO





**"Pullman"  
Lawn Sprinkler**

**IS YOUR  
ORDER IN ?**

Send for Folder No. 14.

**PULLMAN MFG. CO.**  
Rochester, N.Y., U.S.A.

**ONTARIO SILVER CO.,**

Limited,

**NIAGARA FALLS, CANADA.**

Manufacturers of **FLATWARE, CUTLERY and  
ELECTRO PLATE.**

Ask for our Catalogue and Quotations.



**Dundas Axe Works**

**DUNDAS, CANADA.**

Write for Prices

**P. BERTRAM, - Manager.**

**PRINT YOUR OWN SHOW CARDS**

Do it with rubber type. Show Cards sell goods. Profits soon pay for the printing outfit. Two or three dollars will bring a nice outfit.

Send for Circular.

**THE PARSONS-IRONS CO.**

58 Adelaide St. W., - **TORONTO.**

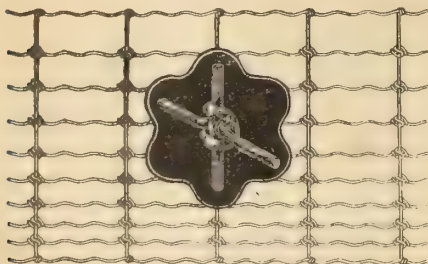
**NEWMAN'S PATENT  
INVINCIBLE FLOOR SPRINGS**

Combine all the qualities desirable in a Door Closer. They work silently and effectually, and never get out of order. In use in many of the public buildings throughout Great Britain and the Colonies.

MADE SOLELY BY

**W. NEWMAN & SONS, Birmingham.**

**STRONG, DURABLE**



**IDEAL Woven Wire Fencing**

The Ideal has proved to be the best fence for the hardware dealer to handle because it is easy to sell, to handle and to erect. The Ideal is made complete in the roll, ready to stretch.

There is a style for every purpose in either light or heavy fencing. Hard steel wire is used for both stays and horizontals. With the Ideal you can build up a permanent trade that will pay you well.

Write for Catalogue.

**The McGregor-Banwell Fence Co., Limited,**  
**WALKERVILLE, ONT.**

**Merrick, Anderson & Co., Winnipeg, Man.**  
Sole agents for Man. and N.W.T.



This design a guarantee of quality

**Heavy Red-Brown Wrapping**

**FOR EXPRESS PARCELS. STRONG, TOUGH AND STIFF.**

Samples and  
Prices Gladly  
Sent.

**CANADA PAPER CO.**  
TORONTO LIMITED MONTREAL

**GALVANIZED FENCE HOOK**

**FOR FASTENING WOODEN PICKET ON WIRE  
FENCES**



WIRE NAILS, COILED SPRING,  
BARB and PLAIN FENCE WIRE,  
OILED and ANNEALED, CLOTHES  
LINE WIRE, STAPLES, etc.

**THE WESTERN WIRE & NAIL CO., Limited,**

**LONDON, ONT.**



**J. M. MAST MFG. CO.'S**

**RAT AND MOUSE TRAPS**

**STRONGEST TRAPS MADE. PRICES EXACTLY RIGHT.**

Canadian Agents: **EDWIN H. GRENFELL & CO., LONDON, ONT.**

**SPRINGS**

**FLAT.—SPIRAL OR VOLUTE**

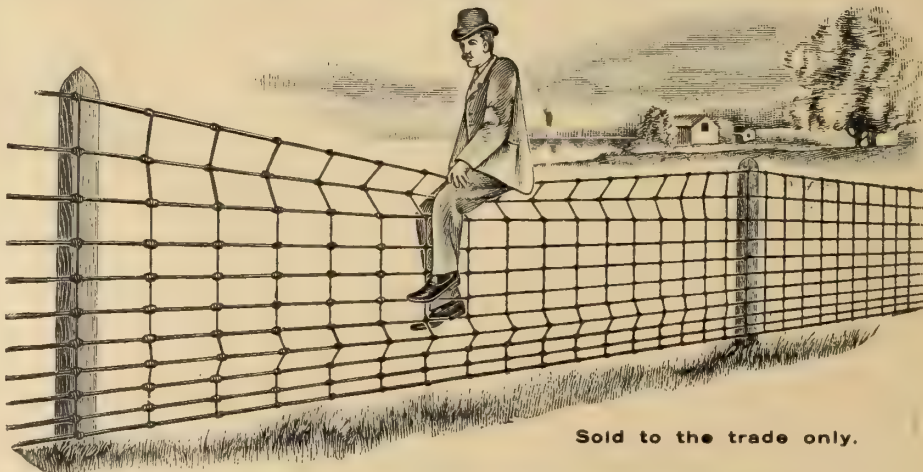
**INTERESTING CATALOG MAILED ON APPLICATION**

**THE WALLACE BARNES CO.**

**BRISTOL CONN.**

**DILLON FENCING**

**THE HINGE IS COMPLETE, AND  
WORKS WITH THE UTMOST  
FREEDOM.**



Sold to the trade only.

**CAVERHILL, LEARMONT & CO., Agents**  
at Montreal and Winnipeg

Manufactured and sold by  
**OWEN SOUND WIRE FENCE CO., Limited**  
Owen Sound, Ont.



**C**ordage

**O**f every description.

**N**et Mountings,

**S**and Line,

**U**noiled Cordage,

**M**arline,

**E**xtra Long Lengths,

**R**atline,

**S**hingle Yarn.

**C**ore Rope,

**O**il Well Cables,

**R**ussian Packing,

**D**eep Sea Lines,

**A**ncor Line,

**G**ood Transmission Rope,

**E**ngine Packing.

**C**lothes Lines,

**O**nly Best Material Used.

**L**og Line

**T**wine.

**D**angerous to use Inferior Cordage.

**M**ail

**O**rders

**N**ow

**T**o us and

**R**ecieve

**E**xceptional

**A**ttention.

**L**ow-priced goods are not always  
the cheapest.



# True Brand Cutlery

## POCKET CUTLERY

GUARANTEED QUALITY.

**BEST GOODS**



## RAZORS

## SCISSORS

**RIGHT PRICES**

**E. F. WALTER & CO.,** 166 and 168 McGill St., **Montreal**

PRICE is a good thing,—but,  
QUALITY is better.

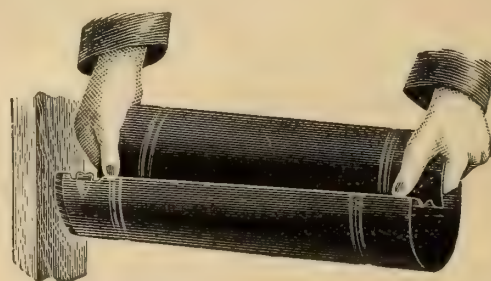
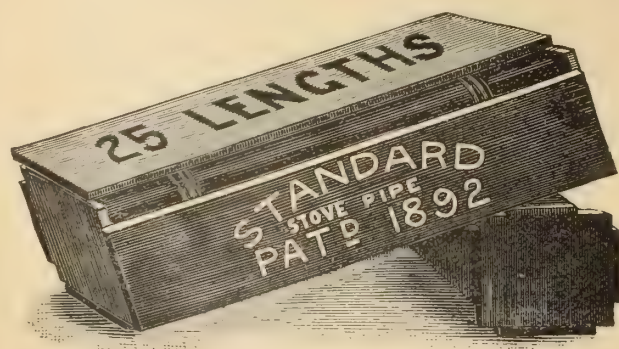
## Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

**Wilcox Mfg. Co. of Ontario, Limited**  
LONDON, ONT.

## Kemp's Standard Stove Pipe { Nestable }

Easily put together, requiring neither rivets nor tools  
Uniform in size, securing a perfect fit.



We carry in stock a full line of metals, comprising Canada Plate, Galvanized Iron and Black Sheets, also Tinplate, etc., which we are at all times **prepared to supply at lowest market prices.**

**KEMP MANUFACTURING CO., TORONTO, Canada**



## RETAIL HARDWARE TRADE OF THE WEST ORGANIZE

Winnipeg Dealers Make a Proposition—Hardwaremen from all parts of the West Fall in Line—  
Four Associations Formed.

FOR the first time in the history of hardware retailing in Canada, an association of more than local scope has been organized. At the invitation of the Winnipeg Retail Hardware Association, hardware merchants from almost every district of Manitoba, and also from the Territories, assembled in Winnipeg on Monday and Tuesday. The purpose of the meeting was to organize a retail hardware dealers' association which should be representative of the west. The success of the meetings may be understood when it is stated that four associations were formed: "The Western Retail Hardware and Stove Dealers' Association," "The Manitoba Association," "The Assiniboine and Saskatchewan Association," and "The Alberta Association."

### DELEGATES.

The following hardwaremen registered:

Winnipeg.—A. P. Macdonald, C. W. Graham, W. A. Templeton, Robt. Wyatt, W. M. Gonlon, W. B. Gordon, C. A. Baskerville, A. G. Buckam, J. McLean, Winnipeg Paint and Glass Co., E. A. Dyke, Oliver Gilmer, J. A. Lindsay, of J. A. Ashdown Co., and J. E. Riley.  
Brandon.—J. B. Curran and E. H. Johnson.  
Boissevain.—H. S. Price.  
Bowden.—H. W. S. Luckhardt.  
Arden.—J. A. Gilhuly.  
Carberry.—H. W. Brown and W. B. Shannon.  
Carlyle.—L. C. Porteous.  
Cartwright.—L. H. Phillips.  
Carnduff.—J. P. Shannon.  
Deloraine.—A. J. Falconer and W. Chalmers.  
Elva.—Thos. E. Wright.  
Elkhorn.—G. Silvester.  
Franklin.—Robt. Craig, of Craig Bros. Co.  
Innisfail.—Percy T. Gosetter.  
Maple Creek.—W. Bennett.  
Minnedosa.—Black Bros.  
Morden.—A. P. Brown.  
Moose Jaw.—R. Bogue and G. K. Smith.  
Nutana.—G. H. Clare, of Irine & Clare.  
Oxbow.—H. G. Wylie.  
Oak River.—J. J. Barr.  
Portage la Prairie.—Fred. Babb.  
Redvers.—L. H. King.  
Rocanville.—W. E. Schwarz, of Schwarz Bros.  
Regina.—Karl Boez and J. W. Smith, of the Smith & Fergusson Co.  
Rosenfeld.—Stewart Bros.  
Swift Current.—W. H. Patterson, of the Swift Current Trading Co., and W. W. Cooper.  
Somerset.—J. A. Decosse.  
Saltcoats.—A. Anderson.  
St. Boniface.—J. A. F. Bleau, of Allaire & Bleau.  
Treesbank.—Est. Wilkinson and C. F. Wood.

### MR. WYATT SPEAKS.

The majority of the retailers were assembled when Robert Wyatt, president of the Winnipeg Association, arose to welcome the visiting retailers.

The meeting was, he stated, the first occasion on which the Winnipeg Association had had the privilege of welcoming their brother hardwaremen in a body. It was a good thing that men engaged in the same line of business should meet together socially or solely for business purposes.

"Three years ago the Winnipeg hardware dealers," explained the speaker, "got together and formed what is known as 'The Winnipeg Retail Hardware Association.' The chief object of the association was to arrive at some understanding and establish prices on such articles of merchandise as were

course, very unsatisfactory. The cut in prices was soon heard of by the other dealers, and all had to reduce their prices to the cost level.

### THE ONLY REMEDY.

"The only way to avoid this was to organize as we did and to prepare a schedule of prices, which was changed from time to time as the costs changed. I am glad to state to you that the prices arranged have been adhered to faithfully by all our members. (Hear, hear and applause.)

"Not only has the association done this great good, but by coming together it has done away with that petty jealousy which so often exists where men live to themselves and do not meet their competitors in friendly intercourse. (Hear, hear.)

"I am a firm believer in selling goods on their merits, and that everything a merchant has to sell should yield him a profit.

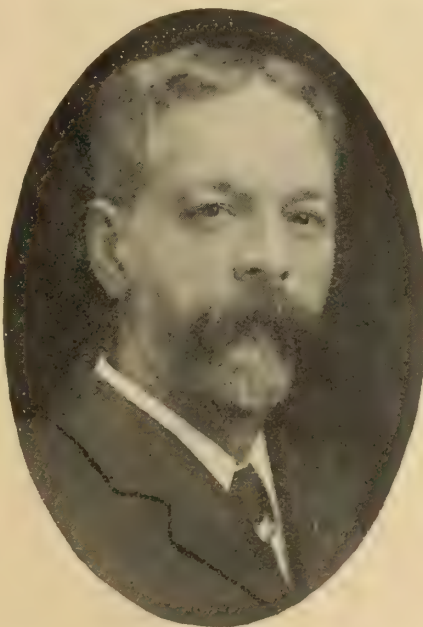
"Another matter that was the source of even more trouble than price-cutting was the selling to contractors by wholesale houses. This part of the business, we felt, belonged rightly to the retailer. Just how to secure it for him has been engaging our thoughts for some little time. I am pleased to tell you that the difficulty has been solved, and to-day, with the exception of a few preferred accounts, nobody can purchase anything at wholesale from the wholesale hardware houses of this city except the retail trade.

"Now, as other speakers will follow who will lay this matter before you more fully, I will add no more, but will ask your full and free discussion of the proposition to be put before you."

### MR. BASKERVILLE.

At the request of Chairman Wyatt, C. A. Baskerville, of Winnipeg, expressed a welcome to the visiting hardwaremen. He was especially pleased to meet many of those he had known or been associated with in one way or another in days past. He was confident they would be glad they had attended the meeting.

"A few weeks ago," he continued, "we sent out our notices of this meeting,



James A. Lindsay, Winnipeg.  
President of the Western Retail Hardware and Stove  
Dealers' Association.

supplied to contractors, viz., nails, building paper, white lead, etc. These goods represent considerable money and outlay, and previous to our organizing there had been no fixed prices on these goods, and in many cases they were handled at slight profit, and in some cases without any profit.

"One merchant would sell nails at cost in order to get the order for locks and hinges; another would cut away his profit on building paper for the same object. This state of affairs was, of



and we were greatly surprised at the unanimity of sentiment favorable to the formation of an association. As I look around this room I am convinced we have the power within us to form one of the strongest associations in the Do-



Wm. W. Lindsay, Winnipeg,  
Secretary, Western Retail Hardware and Stove  
Dealers' Association.

minion of Canada. Unity is strength, and we can be as strong as we desire. Pleasanter relationships are also a desirable end.

#### CUTTING WAS RAMPANT.

"Previous to the formation of the Winnipeg association we hardly knew how to quote, cutting was so rampant. It is now time that the retailers throughout the province secured an equitable price, so that on staple lines there would be no need to sell at cost.

"The proposed association will be an undoubted advantage to the merchants in the towns and villages. If organized they can, with assurance of success, ask the wholesale houses not to sell to contractors and others not legitimate buyers of hardware lines. The wholesale dealers are well organized; each of them puts up a bond as a guarantee of good faith. I have such faith in the retailers that I would desire no bond. (Hear, hear; and laughter.)

"This association should, from the present excellent beginning, grow until it includes every district, every town, every hamlet where there is a hardware store in the west. In time we may hope to have affiliated with us similar organizations in the provinces of eastern Canada."

#### MR. W. B. GORDON.

W. B. Gordon, of Winnipeg, expressed his pleasure at meeting such a repre-

sentative gathering of hardwaremen. Some people stated that the hardware business was a fine one because the goods never went out of style. Such was not the case, however, as there was change in style, and, as, when they did go out of style, they went further out than in any other trade. Reaping cradles, roller skates, etc., were given in illustration of this truth, as many other examples could be given.

#### MR. A. LINDSAY.

A. Lindsay, of the J. H. Ashdown Co., was next asked to address the meeting. Mr. Lindsay felt a thrill of pleasure as he looked into the faces of the many old friends before him, and as memory called back to him the associations of former days.

He was glad to see the new faces, too, for they spoke of the expansion of the west and of the fact that the few shelves of nails, butts, locks, hinges, pans, etc., which constituted the hardware stock of early days, had grown to well-stocked, attractive stores, in which men who were respected in their community were making a fair living.

"In unity is strength," continued the speaker, "and in such strength is a force which overcomes great obstacles.

"I am an association man, yet I am convinced that we should set our faces against aggression of any kind. (Hear, hear.) Unless there is reason why we should organize for protective purposes we should not organize at all.

#### PROTECTION FROM OURSELVES.

"What is there, then, that we should be protected against? First, from ourselves. As the previous speakers have told you, before the Winnipeg association was formed we were afraid of each other. If a customer said a rival was quoting below a fair margin we couldn't go to him and ask him why he did that. Now we meet as friends, and we can ask for any explanation. We know what the cost of doing business is, and have arrived at a method which ensures our getting a fair margin.

"When the Winnipeg association considered a proposal for a schedule of prices I, as I still do, objected to any aggressive measures. We eventually decided to only fix prices on staple lines and to fix them at what any business man would recognize as a fair, just profit. And we have lived up to the agreements made. Sometimes through the fault of a clerk who did not thoroughly understand the situation, the prices have been broken, but such cases have been rare. Personally I would

rather trust to a man's honor than his bond.

#### VALUE OF FREQUENT MEETINGS.

"We should meet as frequently as possible. I believe every member of our association has left each meeting glad that he is a member of the body. Such would be the case if we form a provincial or western organization. If Winnipeg, with about twenty hardwaremen, can hold together, why could not the merchants in a town where there are only two or three get together?

"It is a fact that one merchant in a town can do great mischief to trade for twenty or thirty miles around him. In such a case the western association, if unable to bring the retailer into line, could influence him through his source of supply.

"When we as Winnipeg retailers asked for your views as to a western association, we were surprised at the hearty approval shown. We are now decided that, with your co-operation, we shall go on with the work.

#### THE PROPOSITION.

"Now, I desire to put before you my proposition. I would suggest that we form a western association, which shall be a governing body over a 'Manitoba,' an 'Assiniboine and Saskatchewan' and an 'Alberta' association. My reason for this is that the distances between points, say in Alberta and Manitoba,



Chairman Robert Wyatt, Winnipeg,  
Elected 2nd Vice-President Western Association.

are so great that we could not expect a representative gathering from Alberta at Winnipeg. At the same time if Alberta formed an association of its own, its meetings would probably be attended by a representative gathering.



"At the request of the Winnipeg association I interviewed the officers of the Minnesota State Association, at Minneapolis, the other day, and secured considerable information, which made me more convinced than ever of our need of an association."

After giving several illustrations of the value of the Minnesota State Association, as one of the sixteen which were included in the National Retail Hardware Association of the United States, Mr. Lindsay turned again into a discussion of the work which the western association could accomplish.

#### WORK TO BE ACCOMPLISHED.

The catalogue house evil was one which had aroused national interest in the United States. The retailer alone was powerless to deal with the situation; the jobber could not solve the problem—but the retailer and jobber bringing their influence to bear, on the manufacturer could do great good along this line. (Hear, hear.) The western association should have not the advancement of prices as its great aim, though a fair profit should be ensured. The benefits of such an organization to the individual retailer in city, town and village were beyond question." (Applause.)

#### MR. J. W. SMITH.

J. W. Smith, of the Smith & Ferguson Co., Regina, on being called for his opinion, was enthusiastic. He had always been in favor of the associational idea, and when such a practical, concrete proposition was placed before him he had nothing but commendation and approval. In Regina were four hardwaremen who had learned the folly of doing business without profit. He was not in favor of aggression or coercion. He was anxious to see everybody recognize the cost of doing business and the necessity of getting a margin which would include a reasonable profit. But he hoped that the aim would never be to put up prices. If a report to that effect were to get out to the public the value of the association would be lost at once.

#### PROTECTION FROM JOBBERS.

The retailers should be protected from the jobbers, who sell to blacksmiths and contractors. The Territorial Government, instead of buying its supplies at wholesale rates, should buy them from the retail merchants who were residing in the territories, and who were bending every energy to build up and strengthen the district. The proper influence would bring this about.

Outside of all this, the social side of the association would be a great advantage. He had learned that during his attendance at the various banquets,

and knew it would mean a great deal in the years to come. He was fully in accord with Mr. Lindsay's proposal of a western association, and the three affiliated bodies.

#### OTHER SPEAKERS.

E. H. Johnson, of Brandon, was completely in sympathy with the proposal to form an association and with the method of organization which had been proposed.

H. W. Brown, of Carberry, was ready to do all in his power to make the proposed association a success.

Oliver Gilmer, of Winnipeg, thought the advent of a large departmental store in Winnipeg would tend to disturb prices, owing to their habit of advertising big cuts in some lines, even if they did sell at a price which averaged higher

who cut prices on them to extend their drug business.

D. O. McKinnon, of Hardware and Metal, at the invitation of Chairman Wyatt, made some suggestions based on experience in associational work in eastern Ontario, and promised the co-operation of that paper in all the good work attempted.

Stuart English, of the Commercial, followed with a similar promise on the part of that paper, believing that the work would be in the interests of the hardware trade generally.

J. B. Curran, Brandon, thought three separate associations necessary; one was too cumbersome. If there were three associations grievances could be submitted by the retail dealer to the provincial association, and if the latter could not at once secure a remedy the matter could be taken up by the general secretary. With the united weight of the western trade he was sure to have a remedy obtained.

#### THE ASSOCIATION FORMED.

On motion of J. W. Smith, of Regina, seconded by A. P. Macdonald, of Winnipeg, it was unanimously decided to form one general association to represent Manitoba and the Northwest Territories, and three provincial associations, one to represent Manitoba, one Assiniboine and Saskatchewan, and one Alberta.

The chairman nominated Robert Wyatt, James A. Lindsay, J. W. Smith, J. B. Curran and A. J. Falconer, as a committee to nominate officers for the various associations.

#### Tuesday Morning.

The nominating committee reported the following names for the western association, which report was unanimously adopted, as follows:

President.—J. A. Lindsay, of the J. H. Ashdown Co., Winnipeg.  
1st Vice-President.—J. W. Smith, of the Smith & Ferguson Co., Regina.  
2nd Vice-President.—Robt. Wyatt, Winnipeg.  
Treasurer.—C. A. Baskerville, Winnipeg.  
Secretary.—W. W. Lindsay, Winnipeg.  
Executive—James Ross, Edmonton; C. F. Comer, Calgary; A. F. Grady, McLeod; G. R. Smith, Moose Jaw; T. J. Agnew, Prince Albert; A. S. Smith, Moosomin; H. S. Price, Boissevain; J. L. Gilhuly, Arden; Fred. Babb, Portage la Prairie.

The nominating committee then suggested the names of J. B. Curran, of Brandon; H. S. Price, Boissevain; Fred. Babb, Portage la Prairie; J. A. Gilhuly, Arden; A. J. Falconer, Deloraine; G. Silvester, Elkhorn; E. H. Johnson, Brandon, and A. P. Macdonald, Winnipeg, for the offices of president, 1st vice-president, 2nd vice-president, treasurer and secretary, of the Manitoba association.



C. A. Baskerville, Winnipeg.  
Treasurer, Western Retail Hardware and Stove  
Dealers' Association.

than that of the regular retailer. The retailer and wholesaler should work together to minimize the amount of harm that the departmentals could do.

R. A. Bogue, of Moose Jaw, was highly pleased with the plans laid down. The project had been made so clear that the intention of those behind it was so easily understood that all present could take hold to make the affair an unquestionable success. He thought Mr. Lindsay's proposal of a western association with other three associations affiliated an excellent one. Several matters, such as the selling to consumers by jobbers and the credit system, were especially worthy of attention.

H. S. Price, of Boissevain, was also enthusiastic. Another evil which should receive attention was the selling of strictly hardware goods to druggists



The elections resulted as follows :

MANITOBA OFFICERS.

President—A. J. Falconer, Deloraine.  
1st Vice-President—J. B. Curran, Brandon.  
2nd Vice-President—G. Silvester, Elkhorn.  
Treasurer—E. H. Johnson, Brandon.  
Secretary—A. P. Macdonald, Winnipeg.  
Executive—A. P. Brown, Morden; J. Chalmers, Pilot Mound; John Hunter, Harney; T. E. Poole, Baldur; J. J. Armstrong, Carberry; B. R. Hamilton, Neepawa; Fred. Barr, Oak River; Wm. Bridgett, Virden; A. J. McPherson, Dauphin.

Some discussion ensued as to the advisability of appointing an organizer. Mr. Baskerville suggested that Mr. McKinnon, of Hardware and Metal, be asked to do the work. The latter was unable to accept the task, and suggested that the appointment of an auditor be deferred until the secretary had completed his preliminary work. This suggestion was ultimately adopted.

On motion of J. W. Smith, seconded by A. P. Macdonald, the representatives of the territories on the western executive were authorized and requested to call a convention in their districts for the purpose of organization.

The executive were appointed a committee to draft the constitution and by-laws of the western association.

Tuesday Evening.

The executive reported the result of their labors early at the evening meeting, and after considerable discussion the following constitution and by-laws were adopted as follows for the western association :

PREAMBLE.

The objects of the Western Retail Hardware and Stove Dealers' Association are: Primarily, to promote, foster and encourage the formation of Provincial Associations throughout the West through the medium of which local retail hardware and stove dealers may be brought into closer sympathy one with another, where their annoyances or grievances peculiar to each particular locality may, by concert of action, through its Provincial Association, be adjusted or eliminated.

Second, the bringing together of these Provincial Associations into one grand body where items of broader and wider interest may be discussed. Where questions affecting not only the welfare of the retail hardware and stove dealers throughout the West but the welfare of the great West itself may be taken up and unitedly acted upon.

CONSTITUTION.

Article I.

NAME AND OBJECT.

Section 1.—The name of this association shall be "The Western Retail

Hardware and Stove Dealers' Association."

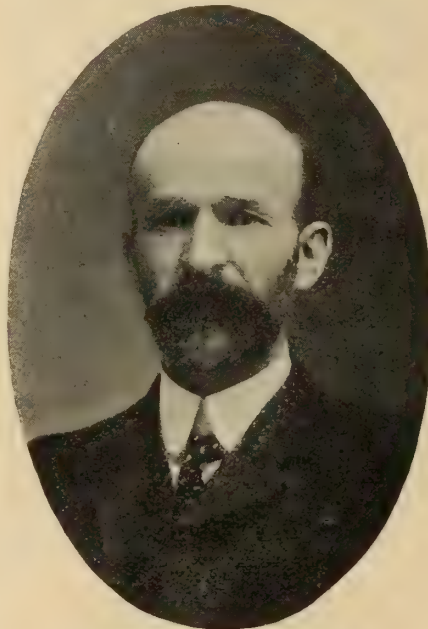
Section 2.—The object of this association shall be to promote the welfare of the retail hardware and stove dealers in Western Canada.

Article II.

MEMBERSHIP.

Section 1.—Membership in the Western Retail Hardware and Stove Dealers' Association shall consist of the members of any local retail hardware or stove association within the bounds of the West, which shall comply with the conditions and requirements imposed by the Western Retail Hardware and Stove Dealers' Association; and meets with the approval of the Executive Committee.

Section 2.—Any member in good



A. P. Macdonald, Winnipeg,  
Secretary, Manitoba Branch Association.

standing of Provincial Associations shall be entitled to membership in the Western Association and can vote for the election of officers at the annual meeting and present proxies and vote on the same for the other delegates from his association.

Section 3.—All travelers representing hardware, paints and oils, stoves, and tinware interests shall be admitted to membership without a vote, on notification by the secretary.

Article III.

OFFICERS.

Section 1.—The officers of this Western Association shall consist of a President, First and Second Vice-President,

Secretary, Treasurer and an Executive Committee who shall be nominated at each annual meeting by a committee delegated by the chair or by any member present and who shall be elected by a majority vote of the members present at said annual meeting. They shall hold office until their successors are elected and shall have qualified.

The Executive Committee shall consist of the President, First and Second Vice-President, Secretary and Treasurer and three members from each Provincial Association affiliated with the Western Association, and who shall be elected at each annual meeting.

Section 2.—The Treasurer shall receive the funds of the association and disburse them through vouchers signed by the President and Secretary.

Section 3.—The Secretary shall be under the direction of the Executive Committee and his duties shall be assigned by them.

Section 4.—The Executive Committee shall pay the Secretary and Treasurer such salary as may be deemed necessary and if they see fit a sufficient bond shall be required from the Secretary and Treasurer, said bonds to be paid for by the association.

Section 5.—In case of a vacancy in any of the offices of this association the same shall be filled by the Executive Committee until the next annual meeting.

The Executive Committee shall appoint an auditing committee to examine the books of the Treasurer and Secretary and report their condition at the annual meeting of the association.

Article IV.

MEETINGS.

Section 1.—The regular meeting of this Western Association shall be held annually at such time and place as may be designated by the association at its previous annual meeting.

Section 2.—The Executive Committee is subject to the call of the President.

Section 3.—It shall be the duty of the President or in case of his inability to serve, of the Vice-Presidents to exercise supervisory control over the affairs of the association, to preside at all meetings of this Western Association and of the Executive Committee and to carry out and enforce all measures adopted by the association calculated to improve the condition of the hardware and stove business.

Section 4.—The presiding officer shall



appoint at the annual meeting a sergeant-at-arms, who shall see that none but

appertaining thereto for adjustment in the usual way.

#### Article IV.

A majority of the Executive Committee shall constitute a quorum for the transaction of business at any meeting.

#### Article V.

A majority of the representatives of the Provincial Associations who have registered shall constitute a working quorum at the annual meetings of the Western Association.

#### ORDER OF BUSINESS.

At the annual meeting of the association the order of business shall be:

1. Roll call.
2. Reading of minutes of last regular and call meetings.



C. F. Comer, Calgary,  
Member of the Executive of the Western Association.

members be admitted, except by order of the presiding officer.

Section 5.—Amendments to the Constitution and By-laws may be made at any regular meeting by a vote of at least two-thirds of the members present, provided four weeks' notice of the proposed change has been made to the members of the association.

### BY-LAWS.

#### Article I.

The finances of the Western Retail Hardware and Stove Dealers' Association shall be provided for as follows:

Each Provincial Association shall be assessed Two (\$2.00) Dollars per member annually, for each member of said Provincial Association to be levied and collected from the Executive Committee of such local association on the 31st of December.

#### Article II.

The Executive Committee shall have power, if necessary, to make a further call once a year not to exceed Three (\$3.00) Dollars per member.

#### Article III.

All grievances that the various Provincial Associations are unable to settle satisfactorily or desire to have submitted to the Western Association shall be turned over to the President of this association with all the necessary papers



A. F. Grady, Macleod, N.W.T.  
Member of the Executive, Western Association.

3. The report of the Executive Committee.
4. Report of Secretary.
5. Report of Treasurer.
6. Report of special committees.
7. General business.
8. New business.
9. The address of the President.
10. Reading of papers and discussion thereof.
11. Election of officers for the ensuing year.
12. Unfinished business.
13. Adjournment.

Attention was then turned to the Manitoba Association, the following constitution being adopted for that body:

### CONSTITUTION.

#### Article I.

##### NAME AND OBJECT.

Section 1.—The name of this association shall be the Manitoba Retail Hardware and Stove Dealers' Association.

Section 2.—The object of this association shall be to promote the welfare of the retail hardware and stove trade in Manitoba.

#### Article II.

Section 1.—Any person, firm or corporation in Manitoba engaged in the business of selling hardware or stoves and known and recognized as a regular retail hardware dealer, may become a member of this association.

Section 2.—All travelers representing hardware, paint and oils, or stoves and tinware interests may be admitted as honorary members without a vote, on notification by the secretary.

#### Article III.

##### OFFICERS.

Section 1.—The officers of this association shall be President, First and Second Vice-President, Secretary and Treasurer, and nine members who, with the President and Vice-Presidents shall constitute an Executive Committee.

Section 2.—The President, Vice-Presidents, Secretary and Treasurer shall be elected annually by ballot, and shall hold office until their successors have



A. J. Falconer, Deloraine,  
President, Manitoba Branch of the Western Association.

been elected and qualify. The Executive Committee shall be elected by ballot annually and shall hold office until



**BY-LAWS.**

their successors are elected and qualify.

Section 3.—The Treasurer shall receive and disburse the funds of the association under the direction of the Executive Committee, through a voucher signed by the President and Secretary, keeping a careful account of the same. The Secretary shall be under the direction of the Executive Committee, and his duties shall be assigned by them.

Section 4.—The Executive Committee may pay the Secretary and Treasurer such salary as may be deemed necessary, and if they see fit a sufficient bond shall be required from the Secretary and Treasurer; such bond to be furnished by the association.

Section 5.—In case of a vacancy in any of the offices of this association, the same shall be filled by the Executive Committee until the next annual meeting. The Executive Committee shall perform the duties of an auditing committee, and examine the books of the Treasurer and Secretary and report their condition at the annual meeting of the association. A majority of the Executive Committee shall constitute a quorum for the transaction of business.

**Article IV.**

Section 1.—The regular meeting of the association shall be held annually at such place as may be designated by the association at its previous annual meeting.

Section 2.—The Executive Committee is subject to the call of the President.

Section 3.—It shall be the duty of the President, or in case of his inability to serve, of the Vice-Presidents, to exercise supervisory control over the affairs of the association, and preside at all meetings of the Executive Committee, and to carry out and enforce all measures adopted by the association calculated to improve the condition of the hardware and stove business.

Section 4.—The presiding officer shall appoint at the annual meeting a sergeant-at-arms, who shall see that none but members be admitted except by order of the presiding officer.

Section 5.—Amendments to the constitution and by-laws may be made at any regular meeting by a vote of at least two-thirds of the members present, provided two weeks' notice has been given.

Article 1.—The annual dues which shall be paid in advance, shall be \$5.00 per year.

Article 2.—Ten members shall constitute a quorum to transact business at any meeting.

Article 3.—Each firm shall have one vote at any meeting of the association.

Article 4.—All fees and dues must be paid before a person can be recognized as a member or become entitled to act in this association.

**MANITOBA ASSOCIATION.**

President Falconer of the Manitoba Association, was now called to the chair. After his expression of appreciation of the honor bestowed on him, he invited the discussion of new business.

H. S. Price moved, seconded by J. B. Curran, that the first convention of the Manitoba Association be held in Winnipeg at the time of the Bonspiel.—Carried.

J. S. Thomas moved, seconded by C. W. Graham, that the thanks of the association be expressed to Chairman Wyatt for the valued work done in pushing business through in such a satisfactory manner.—Carried.

On motion of Messrs. Price and Johnson, the thanks of the meeting were tendered to the Winnipeg association for gathering the meeting together and doing so much toward organizing the West.

On motion of Messrs. Gilmer and Riley, the thanks of the meeting were, in turn, tendered to the hardware and stove dealers from the outside towns for their consistent attendance and their valuable assistance in forming the associations.

**WESTERN ASSOCIATION.**

President Lindsay then took the chair, and the Western Association convened.

On motion of Messrs. Price and Babb, Winnipeg was chosen for the first convention of the "Western Hardware and Stove Dealers' Association." After some discussion it was decided to hold the convention at the time of the Winnipeg curling bonspiel.

On motion of Messrs. Thomas and Gilmer, it was decided to send reports of the convention proceedings to the hardware and stove dealers of Western Canada.

On motion of Messrs. Wyatt and Macdonald, a vote of thanks was tendered to The Commercial and to Hardware and Metal for the assistance rendered and promises for the future.

After a few informal speeches, the meeting adjourned at the request of some of the officers to the Clarendon.

**CATALOGUES, BOOKLETS, ETC.**

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

**Lathes.**

**T**HE F. E. REED CO. are sending out a catalogue of lathes and other machine tools manufactured by them. Pages 7 to 15 of the catalogue are devoted to the description and illustration of amateur screw cutting lathes, 16 to 43 to standard engine lathes, 44 to 48 to special turning lathes, 49 to 52 to hand lathes, 53 to plain foot lathe, 54 to 56 to wood lathes, 58 to 59 to stud and bolt lathes, 60 to 68 to turret head chuck lathes. The remainder of the catalogue is given up to miscellaneous and special machines. This catalogue is made 6 inches by 9 inches, the dimensions recommended by the American Society of Mechanical Engineers for a standard size of machinery catalogue. The illustrations of the various machines are wood cuts, engraved from a print made from a photo negative upon boxwood.

**Scully Steel & Iron Co.**

Hardware and Metal has received from the Scully Steel & Iron Co. a copy of their new machinery catalogue. This catalogue is 6x9 inches, the size recommended as a standard for machinery catalogues by the American Society of Mechanical Engineers. The make-up of this catalogue is very attractive, being handsomely bound in imitation morocco. In this catalogue steel and iron workers' tools handled by the company are illustrated and briefly described. Among those machines to which special attention is paid are punches, shears, bending rolls, drills, benders, flue welders, hydraulic wheel presses, power hammers, facing machines, staybolt cutters, pneumatic riveting machines, hydro-pneumatic riveters, air hoists, pneumatic drills, saws, grinders, etc.

**WIRE NAILS  
TACKS  
WIRE**

Prompt Shipment

**The ONTARIO TACK CO.**  
Limited  
HAMILTON, ONT.



**Before and After.**

Hardware and Metal has received from the Ingersoll-Sergeant Drill Co., 26 Courtlandt street, New York, a copy of a pamphlet just issued by them called "Before and After." This gives a graphic and descriptive illustration of the saving in expenses of the Cleveland Stone Co. by the installation of a compressed air plant by the Ingersoll-Sergeant Drill Co., at the North Amherst (O.) quarry. The running expenses before installation was made amounted to \$337.75, while after they amounted to only \$172.80.

**New Engineering Works.**

Hardware and Metal has received from Graham. Morton & Co., an illustrated souvenir of a visit of inspection to their new engineering works at Hunslet, Leeds, England. This souvenir is 9x11 inches, and is of very handsome design and execution.

This firm make a specialty of designing, constructing and erecting conveying and elevating machinery and crushing plants for collieries, mines, boiler houses, gas and electric light works. They also pay special attention to construction iron work, including roofs, bridges, buildings, power stations, etc.

In England and on the continent this firm have a wide reputation, the many contracts carried out by them being illustrative of their powers.

Maurice Graham is the managing director of these works. He has recognized the value of establishing business relations with Canada, and is now working in that direction.

**Huron Red Hot Furnace.**

The Western Foundry Co., Limited, Wingham, Ont., are sending out a bulletin illustrating and describing their furnaces, applicable for burning hard coal, soft coal, wood or coke. The construction of these furnaces presents many essential features which are entirely new and certainly durable. The radiator and combustion chamber are combined in one, the radiator being very large and having a triple radiating surface consisting of two inside radiating surfaces and one large outside radiating surface. The flue is horseshoe shaped, the air supply passing up through the radiator as well as around it. This affords an unusually large area of surface exposed to the direct influence of the products of combustion.

These furnaces are provided with deep ash pits, dust flue and sectional firepot. They are quite low, and are, therefore, especially adapted for low cellars. The price list shows a range of prices for

# FLOOR FINISHES

**A Special Notice to S. W. P. Agents**

We have just begun a special fall advertising campaign on *Sherwin-Williams Floor Finishes*. We intend to made the line as well known as S. W. P.

We purpose placing the merits of each one of *Sherwin-Williams Floor Finishes* before the property owners of the Dominion in a way that is sure to build up their sales in every locality. We have prepared an advertising feature for this purpose that is undoubtedly by far the strongest floor finish advertising ever sent out.

We want to tell you about the entire plan in detail. Write us and we shall give you full particulars by return mail.

With *Sherwin-Williams Floor Finishes* in stock you can meet every floor finish demand in your territory with the best floor finish made.



**THE SHERWIN-WILLIAMS Co.**  
PAINT AND VARNISH MAKERS

CANADIAN HEADQUARTERS AND PLANT:

21 St. Antoine Street, Montreal

WAREHOUSES: 86 York St., Toronto;

147 Bannatyne St., East, Winnipeg



different sizes from \$10 to \$124. Prices for casings range from \$12 to \$15. Any reader of Hardware and Metal may secure one of these bulletins upon application.

**Penberthy Injector Catalogue.**

The Penberthy Injector Co., Limited, Windsor, Ont., are sending out their 1904 catalogue of injectors, syphons, water gauges, gauge cocks, lubricators, oilers, steam gauges, air cocks, cylinder cocks, air valves, etc. The name "Penberthy" is too well known upon the Canadian market to require any introduction.

In the catalogue are contained some interesting and instructive notes concerning the selecting of an injector. In making the selection the following points should always be considered: First, lowest and highest steam pressure carried; second, the distance the water has to be lifted if water supply is below the injector; third, elevation of water

supply above the injector if water is taken from overhead tank; fourth, water pressure in pounds if water is taken from city mains; fifth, temperature of water supply; and, sixth, the type of boiler to be supplied by the injector, and also the horse-power and type of engine used in connection with it.

**Drilling Machinery.**

Thos. H. Dallett Co., Philadelphia, Pa., are sending out a new catalogue illustrating and describing their portable drilling machines and boiler shell drills. This is of the standard size for machinery catalogue—9x6 inches. Both the illustrations and typographical execution are high class and very clear. The descriptive matter is detailed and entertaining.

**What We Do.**

The Wellman-Seaver-Morgan Co., Cleveland, O., are sending out a little



booklet entitled "What We Do." The purpose of the pamphlet is to briefly afford some idea of the scope of the work done by the company. This has been outlined in a very general way, accompanied by illustrations. Detailed information and more extensive illustrations of the many lines handled by the firm will be found in their general catalogue, which may be had upon application. This is a neat little booklet, and readers of Hardware and Metal may secure one on application to the firm.

#### Rex Flintkote Roofing.

J. A. & W. Bird & Co., Montreal, Que., are sending out a neat little booklet descriptive of their Rex Flintkote roofing. In this booklet facts regarding the merits of Rex Flintkote roofing are presented. The best quality of selected wool fibre is used as the base of this roofing. It is unaffected by fumes, gases, vapors and acids, such as roofing on boiler-houses, foundries, machine shops, factories, etc., is subjected to. It is waterptooft and, being made of non-combustible material, is impervious to fire.

### Business Changes

#### ONTARIO.

**R.** B. SCRIVEN, tinsmith, Otterville, is advertising his business for sale.

James Lawrence, general merchant, Dresden, has been burnt out.

A statement is being prepared by J. E. Langlois, general merchant, The Brook.

A. & B. Swezey, general merchants, Massey, have assigned to Chas. McCrea, Sudbury; meeting of creditors was to be on the 8th inst.

#### QUEBEC.

J. A. Cote & Frere, saddlers, Levis, have registered.

Vachon & Guay, Painters, Quebec, have dissolved partnership.

Mrs. Robert Corner, general merchant, East Templeton, is dead.

J. U. Gagnier, general merchant, St. Martine, has been burnt out.

The assets of J. L. Seguin, general merchant, St. Simon, are sold.

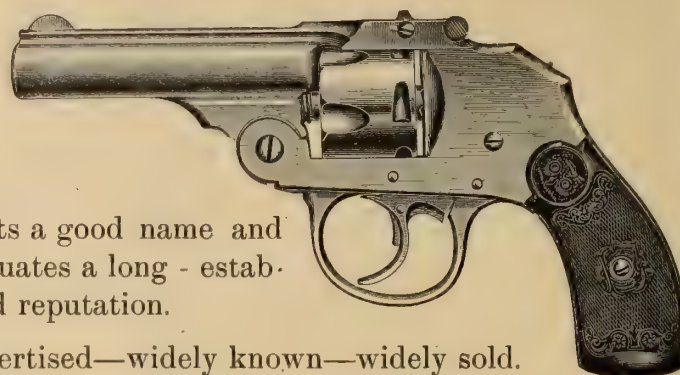
L. H. Chouinard, general merchant, Matane, is offering to compromise.

U. Phoenix & Cie, general merchants, Kingsley, have dissolved partnership.

The assets of Joseph Gagnon, general merchant, Pontbriand, have been sold.

THE SUPERIORITY OF

# Iver Johnson Revolvers



**P**rotects a good name and perpetuates a long - established reputation.

Widely advertised—widely known—widely sold.

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IT IS EDUCATIONAL AND INTERESTING.

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**IVER JOHNSON'S ARMS & CYCLE WORKS,**  
FITCHBURG, MASS.

The firm of E. C. Mount & Co., Montreal, have been registered as plumbers.

J. P. Desilets, general merchant, Grand Mere, has assigned to Lamarche & Benoit.

The assets of J. E. Bergeron, general merchant, Jonquieres, were to be sold on the 10th inst.

A meeting to appoint curator for J. W. Donohue, general merchant, Roberval, is called for the 15th.

J. A. Marchand, general merchant, Fraserville, has assigned to V. E. Paradis, (provisional guardian).

Lefaiivre & Taschereau have been appointed curators for L. A. Robitaille, hardware and furniture dealers, Quebec.

A meeting of the creditors of Eugene L'Ecuyer, general merchant, assigned, St. Polycarpe Junction, was to take place on the 10th inst.

#### MANITOBA AND N.W.T.

W. G. Hudson, blacksmith, Carman, has sold his business.

F. Morrison, plumber, Winnipeg, has removed to St. Boniface.

Geo. Lucas, blacksmith, Bradwardine, is offering his business for sale.

St. Marie Bros., harness dealers, Somerset, have been burned out.

John Tedford, blacksmith, Minnedosa, is advertising his business for sale.

T. Holloway & Son, blacksmiths, Balmoral, have been succeeded by Holloway Bros.

D. E. Frisken, blacksmith, Carman, has sold his business to Alex. Armstrong.

R. J. Grey, furniture and harness dealer, Oak Lake, has sold his harness business.

#### BRITISH COLUMBIA.

P. Beygram, dealer in paints, Victoria, has assigned to Joe Peirson.

#### NEW BRUNSWICK.

D. W. Hartt (estate), general merchant, Fredericton Junction, has been succeeded by Thos. B. Hartt.

#### PRINCE EDWARD ISLAND.

Chas. Hermans, plumber and tin-smith, Charlottetown, is dead.

It is not always necessary to advertise low prices. There are often better bargains in high prices.

The best advertisement is that which says what there is to say in a clear, concise, simple manner and then stops.



August 13, 1904

HARDWARE AND METAL

# H. S. HOWLAND, SONS & CO. LIMITED

Wholesale  
only

TEMPORARY WAREHOUSE:  
**212-218 COWAN AVENUE, TORONTO.**

Only  
wholesale

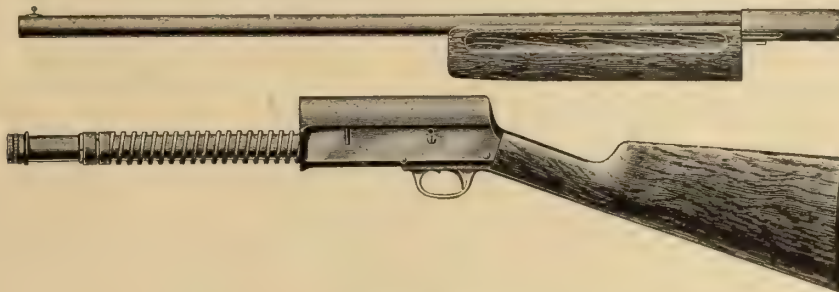
Sample Room at 21 SCOTT STREET, Telephone Main 4056.  
Telephone:—Office, Park 1584. (Where orders may be left if not convenient to visit our Warehouse at Parkdale.) Telephone:—Warehouse, Park 1585.

RETURNED  
AUG 13 1904

## BROWNING AUTOMATIC

Solid Breech Hammerless Repeating Shot Gun.

GREATLY  
REDUCED  
RECOIL

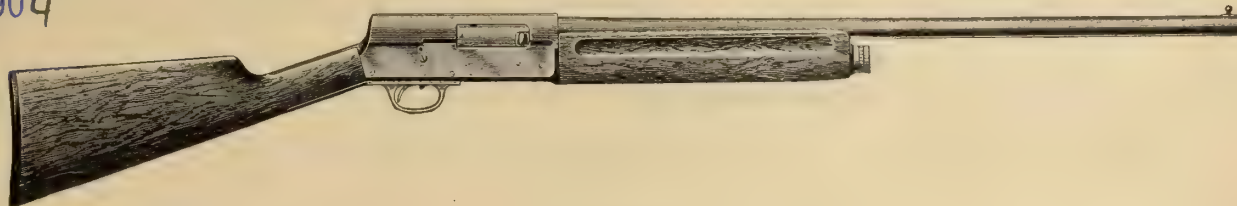


GREATEST  
RAPIDITY

"Taken Apart"

A simple take-down system permits the Browning Automatic Shotgun to be taken apart and put together easily and quickly. This is especially convenient for carrying and cleaning.

RETURNED  
AUG 13 1904



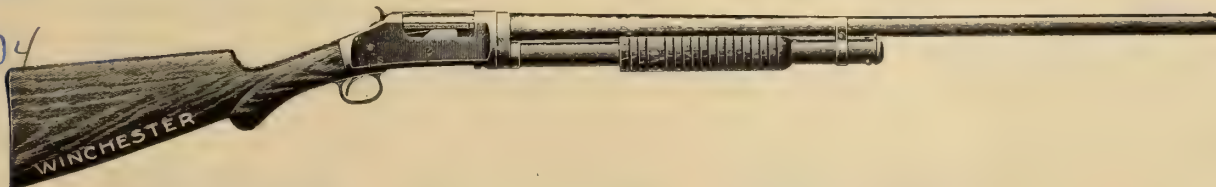
"Take-Down"

No. 1, 12 Gauge, 28-inch Barrel, Shoots 5 Shots, Weight about 7¼ lbs.

Cockerell Steel Barrel, Full Choke, Selected English Walnut Stock, Matted Receiver, Rubber Butt.

RETURNED  
AUG 13 1904

## WINCHESTER REPEATING SHOT GUNS



"Not Take-Down"

Model 1897, 12 Gauge, 30-inch Barrel, Weight 7¼ lbs.

"Take-Down"

Model 1897, 12 Gauge, 30-inch Barrel, Weight 7¼ lbs.

Pistol Grip, Stock and Forearm of Plain Wood not Checked, with Rubber Butt and Plate.

For Shot Guns, Rifles and Ammunition see our Hardware Catalogue.

# H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.  
Factory: Dufferin Street, Toronto, Ont.

Our prices are right.



# PINK'S LUMBERING TOOLS

**THE STANDARD TOOLS** In every Province of the Dominion,  
New Zealand, Australia, Etc.

RETURNED

SEP - 3 1904

Cut Book 23

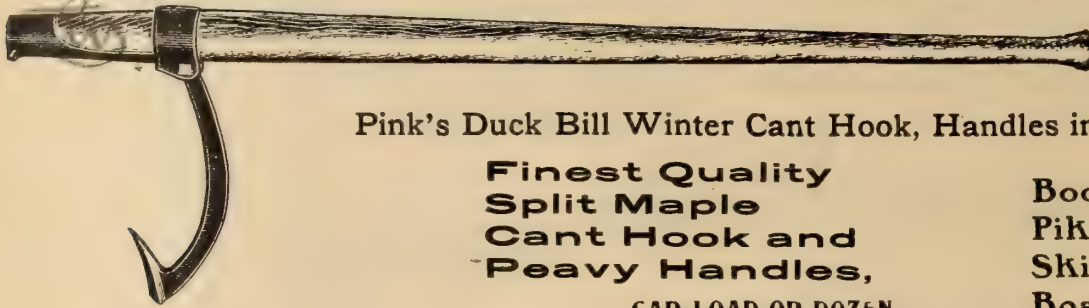
Page 30



Pink's Round Bill Peavy, Handles in Split Maple.

RETURNED

SEP - 3 1904



Pink's Duck Bill Winter Cant Hook, Handles in Split Maple.

**Finest Quality  
Split Maple  
Cant Hook and  
Peavy Handles,**  
CAR LOAD OR DOZEN.

Boom Chains,  
Pike Poles,  
Skidding Tongs,  
Boat Winches, etc.

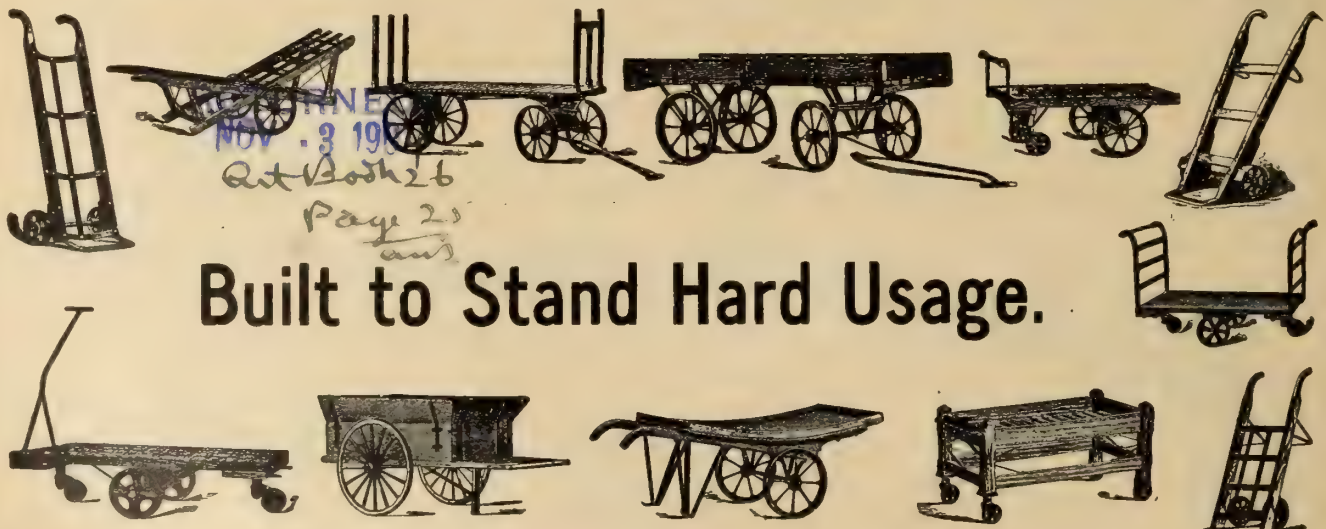
*Sold Throughout the Dominion by all Wholesale and Retail Hardware Merchants.*

I am Agent for the Brazil Patent Snow Plough and Road Maker.

**THOS. PINK, - - - - - Pembroke, Ont., Canada.**

## TRUCKS For Warehouse, Railroad and Hotel Use.

Furnished with Rubber Tires if desired.



**Built to Stand Hard Usage.**

WE CARRY A COMPLETE STOCK OF ALL STYLES AND SIZES.

A Fairbanks Truck serves you right.

Send for Catalogue.

**THE FAIRBANKS COMPANY**

MONTREAL

TORONTO.

WINNIPEG.

VANCOUVER.



# MACHINERY

## MACHINERY MARKETS.

### Quebec.

Office of HARDWARE AND METAL,  
232 McGill Street.  
Montreal, Aug. 11, 1904.

**H**OPEFULNESS for the near future seems the most striking feature of the machinery market this week. While it is said that the presidential election across the border is not effecting Canadian business in the least, there is a slight disinclination to embark in large undertakings, that seems attributable to that cause. This no doubt applies to machinery as much as to any line. Almost without exception dealers and manufacturers say that there is little machinery moving, but express every confidence in an early brightening and quickening of the market.

While some engine installations are reported, machine tools, wood-working machinery, boilers, etc., seem at a standstill, electrical machinery is rather an exception as a brisk business is reported. Enquiries are more numerous than a week ago and collections fairly good.

### Ontario.

Office of HARDWARE AND METAL,  
10 Front street east,  
Toronto, August 12, 1904.

**L**OCAL dealers report a very fair amount of business closed this week. A few good orders have been booked. However that is all that can be said. On the other hand the prospects for Fall trade are unanimously reported by local dealers to be exceptionally bright. Enquiries in all lines are coming in very briskly, and not a few substantial deals are being followed up closely. Especially is this to be noted in the machine tool line.

Everything goes to indicate that buyers are delaying the placing of orders. The reason is no doubt that they are watching developments in the States. Because of the elections pending these things are very quiet. Manufacturers have to do a good deal of stocking in order to keep their plants running, and

of course there is the chance that these stocks will be thrown upon the market at reduced rates. Thus the reason for buyers holding back orders. It is suspected by dealers that even now manufacturers are reducing their stock by making special concessions. However, this has not been noticed to any great extent by local dealers.

### A Serious Situation.

**T**HE authorities of the City of Montreal are confronted by a serious situation, due to the inefficiency of the boilers. It is reported this week that unless new boilers were purchased and installed at the Low Level Pumping Station the city would probably find itself without water this Fall. The boilers have got into such a condition that it is thought they are in danger of blowing up at any time and the problem that confronts the authorities is to shut down and have them cleaned, or risk the danger of a serious accident, in either case the supply being cut off. The Water Committee sent in a report warning the Council of the condition of affairs, and the superintendent said he would no longer shoulder the responsibility of running the water supply of the city.

New boilers cannot be installed for some time, and the present ones are condemned. An accident some time ago put some of them out of commission and thus putting extra labor on the others.

### Machinery and Electrical Notes.

**T**HE Quebec Electric Company, Quebec, are about to commence the installation of their plant at St. Anne and Severn Falls. Among other enterprises this company intend building and operating an electric railway from St. Anne to Murray Bay.

The Reinforced Cement Construction Co., Niagara Falls, Ont., are having a portable engine and boiler installed by H. W. Petrie, Toronto.

The Levy, Weston & McLean Machinery Co., Toronto, report the closing of several large orders for engines and boilers and a planing mill outfit.

The Purity Mfg. Co., Toronto, are

having an engine and boiler installed by H. W. Petrie, Toronto, in their new factory on corner of Florence and Brock avenues, where they will manufacture Castile soap.

H. W. Petrie, Toronto, is just shipping a 12-foot engine lathe with chuck to the Canadian Niagara Power Co., and also an 8-inch Morris pump to the Electrical Development Co., both of Niagara Falls, Ont.

The Eagle Foundry, Montreal, is putting in the Scroggie building two new water-tube boilers. They are to be used for heating purposes. This firm have placed boilers in a great many of the larger buildings that have recently been completed in Montreal.

The Laurie Engine Co., Montreal, have just completed the installation of two large engines for street railway power houses, one in Toronto, and the other in Winnipeg. They are now putting in two engines of smaller size in the Imperial Paper Mills at Sturgeon Falls. This company have just started the manufacture of a new line of triplex power pumps, and expect to have them on the market shortly.

A very large order was received by the Allis-Chalmers Co. in the United States recently. This company, which has been making preparations for months past to enter the electrical field on a large scale, is said to have just obtained a contract for installing nearly 100,000 h.-p. turbo-generating equipment, asserted to be the largest contract of the kind ever made in the world, the value being upwards of \$2,000,000.

One of the new machinery shops to be erected by the Reid Newfoundland Co. for repairing locomotives and building cars in St. John, Nfld., is now about completed. All the machinery, however, has not as yet been destroyed. The pits are so arranged that the working of pneumatic machinery under the engines will be easily accomplished. Hundreds of tons of solid stone and concrete have combined to make the floors as hard as steel, and this is most necessary in view of the great weight that at times will have to be borne. The shop will be heated by steam, and lighted by powerful electric drop lights. The building is 109 feet long and 19 feet wide.



## SYSTEM FOR RECORDING MACHINERY, ETC.\*

UNDER the old system, before the many advantages now obtained by the card system were in vogue, the recording of machinery, tools, buildings and fixtures was done in a specially ruled book, this book being quite an expensive item. Owing to many changes in the factory due to transferring machinery from one department to another which necessitated records being marked out and new ones inserted, the book soon became a mass of unintelligible records and was only explainable by the clerk under whose charge it was, thus causing a great deal of inconvenience when records were wanted promptly.

The writer now gives in detail a system which is original in its entirety so far as the plan goes, however, some of the points here given were obtained from a series of studies on this question and this plan will be a means of quick reference, reducing the work of recording same to a minimum, and is a pleasure for the operating clerk by reason of its redeeming features compared with the old plan. It can be used in commercial or manufacturing businesses readily and though perhaps not used in its entirety, several features contained herein may be used according to the desires of the reader. The principal and most essential points are given showing machinery in the factory, the cost of such machinery, present value, the departments they are in, where located and many other particulars connected with the description of each machine, all the tools in the factory by departments, for what use they were built, depreciation, etc. Every particular concerning all furniture and fixtures is also given. Let us take as our first, machinery: As soon as a machine is received at the factory it is recorded by the receiving clerk on his daily receipt of goods report, Form O. F. 80. You will note the requisition number the machine was ordered on, date received, how received, from whom

daily receipt of goods report. The form is then sent to the office upon which the receipt of the machine is entered on the order card (Form O-49) (this being a duplicate of the requisition ordering the machine) with particulars so that the invoice may be checked with same; the office then issues instructions to the millwright relative to the placing of the

writes out full particulars of the machine.

This form is a duplicate of the cards that are kept in the office and to which all data contained on this form is transferred; it is of thin paper (50 sheets to a pad). The cards (Form O-63A) are now priced and data collected as shown. The price is obtained from Form O. F. 80 (Page 2) daily receipt of goods, cost

| Req. No. <u>G-6140.</u>         |                                                | Date <u>Feb'y 16, '03.</u>      |                                                   |          |                               |
|---------------------------------|------------------------------------------------|---------------------------------|---------------------------------------------------|----------|-------------------------------|
| Name <u>Becker Brainard Co.</u> |                                                | Address <u>Hyde Park, Mass.</u> |                                                   |          |                               |
| Terms <u>30 days</u>            | How Shipped <u>N.Y.N.H.&amp;H.R.R. Freight</u> |                                 |                                                   |          |                               |
| Completed <u>2/22/04.</u>       |                                                |                                 |                                                   |          |                               |
| Quant. Ordered                  | Quant. Recd.                                   | Date Recd.                      | Description                                       | Price    | Remarks                       |
| 1                               | 1                                              | 2/22/03                         | 1 Milling Machine, #26 Plain.                     | \$300.00 | Must be delivered by Feb. 24. |
|                                 |                                                |                                 | Your improved pattern with vise and countershaft. |          | 1904. without fail.           |
|                                 |                                                |                                 | Invoice Recd 2/17/03                              |          |                               |

Form II. O. 49.

machine; the millwright then numbers the machine by attaching a metal tag already numbered to the machine; this tag is attached by means of drilling the machine in two places and then screwing the numbered tag to the machine; the numbered tag is taken from a series of numbers set aside for the different classifications of machines, for instance, 100 to 400 will be reserved for milling machines, 401 to 600 for automatic screw machines, 601 to 750 for drill presses and so on. This brings all the machinery of one kind together and it will be an easy matter to find how many milling machines or screw machines there are in the factory. The millwright after numbering the machine as required then commences to install same in the department in which it is to be operated, he charging his time of installation against the number attached to the machine as if an order of that number emanated from the office; he then issues a requisition bearing the number of the machine to the stock

of freight, where bought and attachments, if any. The cost of setting up is obtained as follows: Labor from the millwright's time checks and material from the requisitions and factory expense.

There are times when the machines have as an attachment a fixture made in the factory or bought outside and which cannot be used on any other machine; this fixture is then treated as a part of the machine and the value is then added to the cost of the machine; if, however, the fixture is of an interchangeable nature it is treated as a tool and numbered accordingly. How this takes place is recorded in this book under the heading of Tools. If a machine of a specially designed nature is to be made in the factory then an order (Form O. F. 44) is issued from the office, number of which is taken from a series reserved for all special machines. The draughting department records are all pattern numbers, drawing numbers and charges all time to the order number; the same with the mechanical force working on the making of the machine, and the factory expense is obtained by the department records.

On Card Form O-63A (Sheet 4) under the word "Total," depreciation may be written off each year, the lines allowing six years to a card, or if written on and between the lines, 12 years. The total depreciation can be readily ascertained from all the cards and then prorated over the production of the factory by a monthly amount. The depreciation is fixed by an inspection of the machines every year, machines of the same kind getting smaller or larger depreciation according to the manner of work done by them.

When the Card Form O-63A (sheet 4)

Sheet No. 25 Daily Report of Goods Received. Date Feb'y 22<sup>nd</sup> 1903.

Receiving Clerk S. Swanson Dept. No. 4

| Received from       | Goods Received  | Quantity | Car Number | How Received | Requisition Number | Invoices No. | Amount | Freight or Express | Amount Charged | Department      | Received by | Dept No. |
|---------------------|-----------------|----------|------------|--------------|--------------------|--------------|--------|--------------------|----------------|-----------------|-------------|----------|
| Becker Brainard Co. | Milling Machine | 1        | 164364     | Freight      | A 6140             | 16           | 300    | 1                  | 25             | Machinery       | R Fenton    | 32       |
| Robt. Sawyer        | Emery           | 200 lbs  |            |              | A 6720             | 17           | 12     |                    |                | Factory Expense | C. Menson   | 5        |
| J. Rejter           | Brushes (M.T.)  | 25       |            |              | A 6540             | 18           | 12 50  |                    |                | Stock           | S. Swanson  | 4        |
|                     | L. Composition  | 100 lbs  |            |              |                    |              | 6      |                    | 30             | Factory Expense | W Walters   | 21       |
|                     |                 |          |            |              |                    |              |        |                    |                |                 |             |          |
|                     |                 |          |            |              |                    |              |        |                    |                |                 |             |          |
|                     |                 |          |            |              |                    |              |        |                    |                |                 |             |          |
|                     |                 |          |            |              |                    |              |        |                    |                |                 |             |          |
|                     |                 |          |            |              |                    |              |        |                    |                |                 |             |          |
|                     |                 |          |            |              |                    |              |        |                    |                |                 |             |          |

Form I. O. F. 80.

wright, obtaining his signature on the and so on. The receiving clerk then turns the machine over to the head mill-

room for the required amount of belting, which is priced by the office and charged to the machine construction account, stock account being credited. After the installation the millwright

\* By Chas. B. Cook in The Bookkeeper and Business Man's Magazine.



is filled out complete an entry is made into the plant book, Form O-132 (Loose Leaf).

This book records the machines numer-

partment number, also charging the amount on Form O-19 at the end of the month with the other additions. The first duplicate of the three copies is sent

|                                                                            |                                       |            |                                 |
|----------------------------------------------------------------------------|---------------------------------------|------------|---------------------------------|
| Machine No. <u>118</u>                                                     | PLANT.                                |            | Date Rec'd <u>Feb 24, 1903.</u> |
| Name of Machine <u>Milling Machine</u>                                     |                                       |            |                                 |
| Description <u># 26 Plain, Improved Pattern with Vise &amp; C.T. shaft</u> | Original Cost                         | 300.00     |                                 |
| Marked <u>Bought from Becker Brainard Co. Belting</u>                      | Extras                                | 25.00      |                                 |
| Location <u>1st Floor Main Bldg. Dept. 3</u>                               | Date put in place <u>Feb 26, 1903</u> | Freight    | 1.75                            |
| Transferred <u>2nd Floor So. Wing " 15</u>                                 | <u>Nov. 23, 1903.</u>                 | Setting up | 3.75                            |
|                                                                            |                                       | Total      | 340.47                          |
| Attachments <u>Dep. 4 7/8 Jan. 1, 1904.</u>                                |                                       |            | 13.62                           |
| Remarks <u>Milling Attachment. Order # 3175 - \$25.00</u>                  |                                       |            |                                 |

Form IV. O-63A.

ically bringing all the milling machines, screw machines, etc., together and is used as a ready means of totaling the additions each month of the machinery account without wading through all the cards when the total is desired on quick notice. It can readily be seen that by adding the footings at the bottom of each column together a total value is arrived at and the value can be proved by the cards each month if necessary. After these entries are made from Card Form O-63A (Sheet 4) to the book the card is then filed numerically in the department as shown by the card where the machine was placed.

The first of each third month three copies at one writing (typewritten) of all machines in each department, giving number of machine and kind are made out, each department requiring of course

the first of the second month to the departments after the additions of the first month have been added thereto,

| Drill Press 6 Spindles. |      |                     |        |      |                   |
|-------------------------|------|---------------------|--------|------|-------------------|
| Number                  | Dept | Maker               | Number | Dept | Maker             |
| 221                     | 3    | Woodward & Rogers   | 264    | 14   | Woodward & Rogers |
| 320                     | 3    | "                   | 285    | 14   | "                 |
| 222                     | 12   | "                   | 312    | 14   | "                 |
| 293                     | 12   | "                   | 313    | 14   | "                 |
| 296                     | 12   | "                   |        |      |                   |
| 223                     | 14   | "                   |        |      |                   |
| 224                     | 14   | "                   |        |      |                   |
| 225                     | 14   | Prentiss & L.S. Co. |        |      |                   |
| 228                     | 14   | Woodward & Rogers   |        |      |                   |

Form VI. O-96.

then the third copy is sent after the additions of the first and second months have been added, after which a new set is made out in triplicate form as usual the first of the month and so on.

The cost of transferring a machine

## Machinery Inventory.

| Additions.     |           |                  |                   |       |       |      |      |     |      |      |      |       |      |     |     |             |
|----------------|-----------|------------------|-------------------|-------|-------|------|------|-----|------|------|------|-------|------|-----|-----|-------------|
| Shop No.       | Dept. No. | Style of Machine | Value             | Jan'y | Feb'y | Mch. | Apr  | May | June | July | Aug. | Sept. | Oct. | Nov | Dec | Total Value |
| 138            | 3         | Milly Mch        | * 13 15<br>250 00 |       |       |      |      |     |      |      |      |       |      |     |     |             |
| 139            | 7         | "                | * 13 25<br>250 00 |       |       | 5 00 |      |     |      |      |      |       |      |     |     |             |
| 140            | 9         | "                | * 25 00<br>225 00 |       |       |      |      |     |      |      |      |       |      |     |     |             |
| 141            | 5         | Foot Press       | * 27 50<br>21 50  |       |       |      | 1 25 |     |      |      |      |       |      |     |     |             |
| * Depreciation |           |                  |                   |       |       |      |      |     |      |      |      |       |      |     |     |             |

Form V. O-132.

a separate report of their own machines, the originals are sent to the foreman of the department they represent for them to check the machines with, after which they return same to the office; the office then notes all the changes, if any, and where a machine has been declared unfit for future use or transferred to another department proper adjustment can be made. If the machine has been transferred it only means lifting the card out of the old department to the present one, the department from which it was transferred being credited with the amount and the department to which it was transferred being debited on Form O-132 by simply changing the de-

partment number, also charging the amount on Form O-19 at the end of the month with the other additions. (Machinery Maintenance.)

As an addition to this system, and where the largeness of the factory warrants it, a card (see Form O-96) is used to show the quantity of each kind

| Department #1-Japan. |       |        |           |         |        |        |      |       |     |
|----------------------|-------|--------|-----------|---------|--------|--------|------|-------|-----|
| Machy                | Vises | Plumbg | Elec. Eq. | Pulleys | Shaffs | Cab. L | Dsk. | Total |     |
| Nov. 640             | 11    | 1126   | 27        | 129     | 60     | 3016   | 350  | 110   | 60  |
| Dec                  |       | 121    |           |         |        | 10     |      | 5     | 102 |
| Jan.                 |       |        |           |         |        |        |      |       |     |
| Feb                  |       |        |           |         |        |        |      |       |     |
| Mch                  |       |        |           |         |        |        |      |       |     |
| Apr                  |       |        |           |         |        |        |      |       |     |

Form VII. O-19.

## CONDENSED MACHINERY ADS.

## YEARLY CONTRACT RATES.

|                                       |         |
|---------------------------------------|---------|
| 100 words each insertion, 1 year..... | \$30 00 |
| " " " 6 months.....                   | 17 00   |
| " " " 3 months.....                   | 10 00   |
| 50 " " " 1 year.....                  | 17 00   |
| " " " 6 months.....                   | 10 00   |
| 25 " " " 1 year.....                  | 10 00   |

## MACHINERY WANTED.

Notices under this heading inserted free for subscribers to HARDWARE AND METAL

CIRCULAR shears and double seaming machine, in good order. Moore Bros., Bradford, Ont. (29)

MACHINIST.—Wanted, a good machinist for general repair work; steady job. W. G. Paton, Wingham, Ont.

## MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

ENGINE LATHE—Swings 17 in. over shears, takes 4 ft. between centres; good order; cheap for cash. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

FOR SALE CHEAP.—Medium size lathe; 25-pound power hammer; large wet grinder—all in perfect condition. F. E. McKyes & Co., 428 Visitation street.

GAS AND GASOLINE ENGINES.—Fairbanks, 1 to 100 h.p.; stationary, portable and marine; fully guaranteed; reliable and economical. Write for catalogue and prices. The Fairbanks Company, Toronto.

IRON PLANER—24 in. x 24 in. x 6 ft., second-hand in first-class condition, for sale; a quick turn over. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

MACHINE TOOLS for prompt delivery—Planers, shapers, lathes, drills, bolt cutters, milling machines, punches and shears; also, full line of machinists' supplies. Good second-hand machinery taken in exchange. Show room open 7 a. m. to 11 p. m. H. W. Petrie, Toronto.

MACHINERY for 50-barrel flour mill; nearly new. Tenders will be received by the undersigned for the purchase of machinery of a 50-barrel flour mill, plansifter system, steam power. Steam plant and machinery will be sold separate if necessary. Highest or any tender not necessarily accepted. For further particulars apply to F. P. Shaw, Thessalon.

NEW STATIONARY ENGINES — 20 x 24 Waterous sawmill engine; 14 x 18 Waterous sawmill engine; 9 x 10 McEwen engine; 13 x 14 McEwen engine. Waterous, Brantford.

ONE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

THE STUART MACHINERY CO., LTD., 764-766 Main street, Winnipeg, sole agents in the West for MacGregor Gourlay's wood working and iron working machinery, than which there is none better. Also for Beardmore's leather belting, Dodge wood pulleys and self-oiling hangers, Soule steam feeds for sawmills, E. Leonard & Son's engines and boilers, Stratford flour mill machinery, etc., etc., etc.



of machine according to its special features, for instance the single-spindle drill presses are all recorded together with their different makers, milling machines and so on.

Shaftings, pulleys, hangers are entered

| Order No.                                                                                                 | For Dept. | Account     | Date issued  |
|-----------------------------------------------------------------------------------------------------------|-----------|-------------|--------------|
| 3134                                                                                                      | 5         | Tool Const. | Nov 24, 1903 |
| To Mr. F. Johnson. Dept. No. 7                                                                            |           |             |              |
| Please execute the following order and carefully charge all material and labor to the above order number. |           |             |              |
| Nine two piece dies for left carriage end S-203                                                           |           |             |              |
| Drawn by E. W. S. 4-5-1                                                                                   |           |             |              |
| Quantity finished 2.                                                                                      |           |             |              |
| Approved L. Lewis, Supt. Foreman F. Johnson                                                               |           |             |              |
| Date Completed Feby 4, 1904                                                                               |           |             |              |
| This order must be approved before commencing the work                                                    |           |             |              |

Form VIII. O. F.-44.

per department on cards as here shown (Form O-19).

This card also shows the transfers of the total value of all machinery, tools, furniture and fixtures, giving the actual inventory per departments every month.

A discarded machinery account is kept and at the end of the year when inventory is taken depreciation account is credited with the amount, as all discarded machines are thrown into factory expense at the time they are declared to be of no use.

(Concluded in next issue).

#### Water Tube Boilers.

SOME tests have been made lately on the part of a French engineer, M. E. Duchesne, to ascertain the proper angle of the tubes in a boiler. In the experiments made the tubes were of the Niclausse type, of glass, and the experiments were carried out at atmospheric pressure. With an inclination to the horizontal of 8 degrees a perfect circulation and a rapid disengagement of steam bubbles from the heated surface were obtained. The results were applied to the design of a water tube boiler. The entrance of feed water into the inner elements of the bottom rows of tubes is found to materially aid circulation. The diameter of the water tube is 3.1 inches, with a maximum length of 30 times this diameter. It was shown that by using a greater ratio of length to diameter than this the circulation is unduly retarded.

In a paper read by A. Dement before the Western Society of Engineers, the author takes up the question of the performance of boilers and chain grate stokers. He gives the results of tests made on a Babcock & Wilcox boiler and on two Heine boilers. The former was of the ordinary type, while the first Heine boiler was fitted with a furnace by enclosing the lowest set of water tubes in the casing of tiles to within three feet of the back end of the tubes. In the ordinary Heine boiler

the gases flow diagonally from the back end of the lowest set of tubes to the front end of the top row of tubes. The boilers were fitted with Babcock & Wilcox chain-grate stokers, and were all of approximately the same size and power, the Heine boilers having a slight advantage in this respect. For greatest efficiency the baffle plates should be arranged so that the area is reduced as the gases fall in temperature, the velocity of the gases over the tubes remaining constant. The addition of these baffles gave results equal to an economiser requiring a large investment and considerable expense for maintenance, an economy of 21.4 per cent. being obtained simply by their use. With chain-grate stokers, the author concludes, that, owing to the relative thinness of the fire at the back of the grate, air in excess generally finds its way through this part of the fire. With a boiler fitted with no fire-brick furnace, the products of combustion, together with the unburned volatile matter driven off from the front of the grate, do not become mixed with the excess of air until their temperature has been reduced below that necessary for combustion. With a furnace, however, the temperature has not been reduced before the gases can mix, and consequently the volatile matter is not discharged unburned. The author advocates the working of chain-grate stokers with very thick fires, and with closed ash grates, to prevent excess of air as much as possible. In the experiments as high as 19.3 per cent. of CO<sub>2</sub> was obtained in the flue gases by doing this. The excess in efficiency of the furnace in the Heine boiler, due to the tile brick roof furnace over the Babcock & Wilcox boiler, fitted only with fire grate and no furnace, was 8.86 per cent., the difference being due to more complete combustion. In the discussion on the paper, it was stated that a Babcock & Wilcox boiler, which had been provided with a furnace by casing the lower rows of tubes with fire-brick tiles and with baffle plates for causing the gases to flow along the tubes, the full length of the boiler, had had its efficiency greatly increased, though no quantitative results were given.

#### Lathe Tool Tests.

D. R. J. C. NICHOLSON, of the Manchester Technical Institute, formerly professor of mechanical engineering in McGill University, has recently made very exhaustive tests with a lathe-tool dynamometer, to determine the power used and the most efficient angle for proper cutting. The necessary reconsideration of the design of lathes, for the rapid and heavy cutting, rendered possible by the new tool steel, led him to undertake a thorough and systematic investigation of the forces acting upon a cutting tool, dur-

ing which he made over 300 trials, from which the following regime is made:

The opinion generally held concerning the relation of the cutting force to the depth of cut was that—as first enunciated by Hartig—the former varied in simple proportion to the latter. Although this law of variation was controverted by Prof. R. H. Smith in his work on "Cutting Tools," the author of this paper finds that his experiments substantiate Hartig's law to a first approximate. The apparatus used consisted of two specially arranged dynamometers capable of measuring forces up to 15 tons on the tool-point when taking a cut; the force-measurer itself consisting of an hydraulic support and a Bourdon gauge. The chief conclusions deduced from the experiments are as follows:

In the case of medium cast-iron the variation of the cutting-stress with the cutting-angle is very marked. It varies by nearly 100 per cent. of its smallest value, which takes place, in every case, for a cutting-angle of about 60 degs. This angle of minimum cutting-force is by no means that of greatest durability. A cutting-angle of 80 degs. is that indicated as being best for shop use, and the cutting-stress for this angle is about 75 tons per sq. in. In the case of soft steel the variation of the cutting-stress with the traverse in the case of soft steel is somewhat complicated. For keen cutting-angles (below 75 degs.) fine traverses require less cutting-force than wide ones; whilst for blunt-nosed tools (i. e., cutting-angles greater than 75 degs.) the reverse is the case, and the fine traverse cut requires the greater effort to remove. At a cutting-angle of 75 degs. the stress is the same whether the traverse be 1-16 in. or  $\frac{1}{8}$  in., and has the value of about 100 tons per sq. in. It is curious to remark that this angle of 75 degs. is also about the best angle for shop use. Ordinary shop-tool, when cutting soft steel of this quality, exerts a vertical force of 100 tons per sq. in. of area of cut removed, irrespective of the proportion of width of traverse to depth of cut.

Experiments made for examining the durability of different cutting angles showed that a cutting angle of from 75 degs. to 80 degs., with tools of 45 degs. plan angle, were the most durable for medium cast-iron. As the cut three sixteenths inch was somewhat shallow, and the tool points had a small radius, about 3-32 inch in plan, the shaving moved off in a direction nearly perpendicular to the axis of the work, instead of at right angles to the cutting edge of the tool. This means that the actual cutting angle, measured in the direction of motion of the shaving, was about 81 degs.

Tools should therefore be ground for maximum endurance in the cutting of cast-iron in ordinary shop practice, so that their true cutting angles are about 81 degs.; or, if they are allowed 6 degs. clearance for working on the level of lathe centres, they should have an included angle of about 75 degs. In the case of medium fluid-pressed steel the trials seemed to show that a cutting angle of about 70 degs. (included angle 65 degs.) is that which will last the longest in rapid cutting. The plan angle of the cutting edge was 45 degs. throughout.



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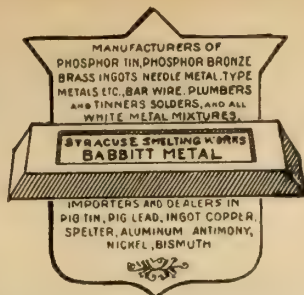
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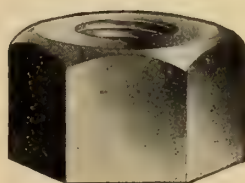
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# HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN,

Montreal.

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### DEDICATION.

**H**ARDWARE AND METAL believes in the future of the Canadian West. This belief is attested to by the present number, which has been prepared in honor of the Dominion Exhibition, which came to a successful termination last week in Winnipeg. In another portion of the paper, we devote considerable attention to the various phases of the Exhibition and illustrate a few of the notable displays. These in point of beauty of arrangement, and general interest were the equal of anything ever before shown in Canada. Altogether the Exhibition was a remarkable success and the directorate are to be congratulated on their enterprise and good management.

### A REGRETABLE INDISCRETION.

**S**IR RICHARD CARTWRIGHT'S speech in the House of Commons the other day in defence of the appoint-

ment of Mr. Jackson as commercial agent at Leeds is one of the most regrettable incidents in Canadian public life for some time.

Although we have with the Boards of Trade and the Canadian Manufacturers' Association had on more than one occasion to complain of the lack of energy displayed by Sir Richard Cartwright in the administration of the Department of Trade and Commerce ever since he came into office, we have always held that he was a type of politician superior to most of the men in public life to-day on both sides of the House. He was a strong politician and an ardent Liberal, but his record on the whole has been a clean one. He did not stoop to the questionable methods of the average politician. His fall from grace, therefore, comes as a great disappointment to a great many people of both political parties.

Liberals everywhere are regretting his indiscretion of the other day. It is true he was responsible for the appointment of Mr. Jackson, but it would have been infinitely better if in the heat of party debate he had not allowed himself to be lead into the discussion.

Sir Richard Cartwright's public life cannot necessarily be many years longer. His age precludes this. It is, therefore all the more to be regretted that in the closing years of his public career he was lead to enunciate principles which even in political affairs are morally unsound.

We have watched with a good deal of interest the reports of Mr. Jackson since he began his duties as commercial agent in Leeds. He has certainly exhibited more ability than we anticipated. He was a lawyer and not a practical business man, but since his appointment he has evidently done his best (and his best has been by no means bad) in the interest of Canadian trade. We have been particularly struck with the zeal which he has displayed in suggesting ways and means whereby Canadian exporters might increase their trade with the business men in his district. He has made

some mistakes but his record has on the whole been fairly good.

It is to be regretted, however, that his political career in Canada was not so creditable. The methods he employed to secure evidence designed to unseat a political opponent were dispicable and no stronger words in condemnation of his conduct have been used than those of Judge Street, before whom the South Oxford election trial was heard. For Sir Richard Cartwright, therefore, to attempt to condone what Jackson did was most unfortunate.

It was unfortunate indeed, in the first place, because of the bad political doctrines which it enunciated. It was bad in the second place because of the reflection it must necessarily cast on Canadian public life in Great Britain, where Mr. Jackson is a representative of the Dominion Government. Political life in Great Britain is on a higher moral plane than political life in Canada, but it is not about the opinion of the public men in Great Britain that we are so much concerned; it is the opinion of the business men there.

To know that one of the officials who is representing the Dominion in a commercial capacity has been guilty of political practices which were so strongly denounced by a Canadian judge, and yet condoned by Sir Richard Cartwright, the head of the Department of Trade and Commerce, will certainly not tend to strengthen the credit of Canada in British business circles.

### A DANGEROUS THING.

**A** DOLLAR is sometimes made or saved by a dishonest action; but it is a dangerous practice. From an economic standpoint, dishonesty is unprofitable. Business is based on presumptive honesty. Men transact business with each other because they believe that honesty is the rule and not the exception.

"We live by faith, not by sight," is just as true in business affairs as in orthodox religious conduct, and is just



as essential in the one as in the other. It is true the banks do not set much value on faith. They pin their belief in collateral security. Faith they rarely practice. It is not taught in their text books. Business men, on the other hand, walk by faith to a great extent, and when any of them stoop to dishonest actions they not only do that which, in the long run, is unprofitable to themselves, but that which tends to disable and weaken the chief superstructure of trade and commerce.

### TO THE HARDWAREMEN OF CANADA.

EVERY retail hardware dealer in Canada should read the report of the organization of the Western Retail Hardware Association, and its affiliated associations, representing Manitoba and the Territories.

To the western retail merchant this step is pregnant with vital significance. It means that if the western trade get in line to make the association a powerful body they can rid themselves of the abuses which have been the cause of constant friction and irritation for years to come.

As President Lindsay stated, there is no necessity for aggressive action in such an association. It should be, however, an effective force for protective purposes. The work suggested by the officers of the association, the stoppage of selling staples without a profit; the persuasion of wholesale dealers to desist from selling to contractors and blacksmiths; the improvement of the credit system, and, when the association is fully organized, the turning of attention to the many minor troubles which curtail the rewards of hardware retailing in the west; all of these are of such import that every hardware merchant who is progressive or who has a deep regard for the future welfare of his business, can well afford to invest any sum up to \$25 per year to make the association a success.

The total sum asked of each man will not be above \$11 per year, and in many years it probably will not aggregate that, as part of that amount is composed of special assessments to meet especial needs.

Hardwaremen of the west, if you are alive to your interests you will get behind this movement and make the association one that shall be able to cope with the strongest organization formed in other branches of the trade!

And what of this to the hardwaremen of the east? The sturdy pioneers of the west have blazed the way and shown what can be done in these days of united and earnest endeavor. It is safe to say that hundreds of hardwaremen in eastern Canada, in Ontario especially, are alive to the value of associational work, to the need of uniting together to protect their own interests and that of their fellow tradesmen.

In the olden days there were the "honorable guilds" of almost every class of tradesmen in the Mother Country. Why should not the same be the case in Canada in the days to come? Why should not the hardware retailer be looked up to as one of the strongest and most influential business men of his town, as the representative of an association which could hold its own with any body or corporation in the land?

There is no reason why the hardware dealers should not be organized, and through their organization be protected against anything which in an unfair way limits his business or curtails his margin of profit.

Hardwaremen of the east, now is a time to act, to make clear your opinion on this subject. Let the trade hear your opinion regarding this matter. Write us a short, pithy letter giving your reasons for or against such an association in Ontario, in Quebec, or in the Maritime Provinces, similar to that formed by the hardware dealers of the west.

Send in your letters early that we may publish some of them next week.

### TIMELY LEGISLATION

TIME alone can fully reveal the effects of the anti-dumping clauses of the new tariff; the workings of every change in the law are more or less veiled. One thing is certain, however, that the attempt to protect Canadian manufacturers against this evil has been made at a most opportune moment.

Difficult as it is to account for in all its phases, the presidential election year in the United States is usually attended by a serious slackness in trade that is thoroughly understood and prepared for by merchants over the entire country. So pronounced is the decrease in the business done that, it is said, buyers have the strictest orders to cut down their purchases fully 25 per cent. In fact, it is not unusual for foreign buyers to remain at home for the entire year.

This straitened outlet for the products of the factories, combined with the desire to maintain prices at home, calls for an increased exportation, and Canada has heretofore been the first choice as a customer. During the election year, accordingly, we have been flooded with surplus United States goods, and prices have corresponded with the oversupply. A large part of these receipts has been sold at prices intended only as a provision for the retention of workmen and as a means of disposing of what was already made. Profit was a secondary consideration.

This year has witnessed no change in the preparations for a smaller volume of business, and the same oversupply in the United States markets is sure to follow. Under the new tariff, however, not only will a great part of these goods be kept out of the country, but the remainder is likely to enter only at regular prices, thus preventing any interference with our own production.

### EXHIBITION VISITORS.

THOUSANDS of buyers will be in Toronto during the exhibition, combining business and pleasure. Many of these will be unacquainted in the city and almost all of them will find addresses changed since the fire. At any rate, there will be bits of information desired by them all in their purchasing rounds.

The offices of Hardware & Metal at 10 Front east will be thrown open to our readers as an information bureau, where answers to all questions regarding the city and its business firms will be cheerfully given. Our offices are situated almost in the heart of the business section, and buyers will find them most



convenient for finding out what they wish to know or for having a rest between their business calls. All the city papers will be on file, as well as the greater number of newspapers published from one end of Canada to the other.

#### SHINGLE SIDING CO. TO REBUILD.

THE accompanying illustration gives an idea of the appearance of the ruins of the factory of the Metal Shingle and Siding Co., Limited, Preston, as a result of the fire. As can be seen from the illustration the factory buildings were totally destroyed. However, the metal-clad warehouse, containing \$8,000 worth of stock, which was located about 15 feet away from the factory, was saved from the conflagration.



Ruins of Shingle and Siding Company's Plant.

A successful attempt might have been made to save the factory buildings but for the large amount of oil and paints used in the factory, because of which the fire had made great headway before the brigade reached the scene.

The loss on the buildings and contents was \$40,000, while the insurance was only \$20,000. The cause of the fire was not known at the time, nor has it since been discovered.

Immediately after the fire the enterprising company began to make plans for the recommencement of manufacturing operations. The vacant

Galt, Preston, and Hamilton Street Railway power house was leased as temporary quarters. The large machines which sustained slight injury in the fire were removed from the ruins to the temporary quarters, and within a few days after the fire were started in operation. For some weeks back active manufacturing has been in progress, and orders filled daily.

This business was established in 1898, and started with five employes. The phenomenal growth of the enterprise is illustrated by the fact that before the fire wiped out the factory sixty men were employed. The firm attribute this success to the fact that they always aim to extend to their customers the fairest and most liberal treatment. Their mot-

metal building material and the facilities most necessary for their economic production, will be of great value to the firm in designing and arranging the new factory.

#### AN OVERSIGHT.

IN last week's issue of Hardware and Metal, on page 23, is an article entitled "Carrying a Message to Garcia." Owing to an oversight this was not credited to the American Metal Market and Daily Iron and Steel Report, as it should have been. We regret much the neglect, but wish to assure our contemporary that it was a mistake and not intentional.

#### ENORMOUS GROWTH OF LAKE COMMERCE.

THE people of the United States have thus far scarcely realized the importance and magnitude of the traffic on the chain of lakes. Only a short time ago Detroit stood second as a port of entry in the United States, and by this time she may possibly stand first, as she handles over 17 per cent. of the reports of the entire series of northern border and lake ports. It has long been a proud boast of the City of the Straits that more than twice as much tonnage passes through the Detroit River during the season of lake navigation as through the Suez Canal during the entire year. This is literally true. The figures for 1902, for instance, as given by the Blue Book of American Shipping, are 48,000,000 tons for the Detroit River, as against 11,248,413 tons for the international waterway.

The summaries of the tonnage passing the Government locks at Sault Ste. Marie afford the best indication of the enormous growth of lake commerce, as the greatest development of the grain and iron ore trades has been through ports at the head of Lake Superior. These reports show that the freight movement in 1902 had reached the enormous total of 35,961,146 net tons, against 11,214,333 tons in 1892, only ten years previous, and against only 1,567,741 tons in 1881, the first year in which the number of tons of freight was recorded. Similar gains are shown in the registered tonnage of vessels, which amounted to 31,955,582 tons in 1902, as compared with 10,647,203 tons in 1892. In 1903 the totals were: Iron ore, 21,654,898 tons; coal, 6,937,633 tons, and grain, 93,480,198 bushels.



# MARKETS AND MARKET NOTES

## QUEBEC MARKETS.

Office of HARDWARE AND METAL,  
232 McGill Street,  
Montreal, August 12, 1904.

**I**N reviewing the general hardware trade for the present week, it is difficult to mention any new features that did not obtain a week ago. Business in general continues rather quiet with some lines fairly active. Travelers are returning from their holidays and are preparing for general business, but the usual Autumn trade has not yet started in full swing.

The wire nail situation remains unchanged and the cutting of prices still continues. The only change of price noted this week is a slight advance in grindstones of 50 cents a ton.

**Agricultural Wrenches**—The demand for these is fairly active, we quote: 6 in., \$2.85 a dozen; 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

**Grindstones**—There is an unusually good business in grindstones at this season, being the time when they are in most demand. We quote: 40 to 200 lbs., 2 in., and over thick, \$1.10 to \$1.20; 20 to 40 lbs., 2 in. thick and over, \$1.20; 11-2 in. thick and under 2 in., \$1.30.

**Skates**—We quote the following prices: Halifax pattern, plain, 38c a pair; nickeled, 60c a pair; Ladies nickel plated, plain 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50 a pair; hockey, plain steel 30c a pair; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop \$1.30 a pair, high grade nickel plated, concaved \$1.60 a pair.

**Hockey Sticks**—Prices are: Second growth men's \$4.00 a dozen; second growth ash, men's, \$3.30 a dozen; rock elm \$2.35 a dozen; boys' elm, \$1.50 a dozen.

**Hockey Pucks**—Price quoted for coming season is \$2.10 a dozen.

**Lanterns**—A fairly good demand, with no change in prices. We quote as follows: Cold blast, \$7.00 a dozen; No. 0 safety, \$4.00 a dozen.

**Sleigh Bells**—We quote; Brass team

bells, rough \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5.00 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3.00 each.

**Washing Machines**—Sales in this line are somewhat fewer than during the earlier part of the season. We quote: Round (three legs), \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

**Spring Hinges**—Merely a nominal trade passing. Our quotations are the following: No. 5, \$17.25 per gross; No. 10, \$18 per gross; No. 20, \$10.50; No. 120, \$20; No. 51, \$9.25; No. 50, \$27.50.

**Heavy Screw Hooks and Hinges**—The market is somewhat brighter this week, and more orders are reported. Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

**Wire Coat and Hat Hooks**—Business is fairly brisk, with no changes whatever. Prices continue 75 cents a gross for 3 inch.

**Churns**—The season is somewhat advanced and there is little doing in this line. Discounts 40 and 15 per cent, f.o.b. Montreal, and 30 and 10 per cent. f.o.b. factory.

**Annealed Hay Wire**—Jobbers report a brisk demand in annealed hay wire, the volume being much larger than usual. Prices and discounts remain the same as before.

**Fence Staples**—A fairly good trade. We quote: \$3 per 100 pound keg for galvanized, and \$2.80 for bright; 25 to 50 lb. packages, 25c extra.

**Barb Wire**—The demand is not at its greatest in this line, but nevertheless a fair trade is being done. We quote: as follows: \$2.75 per 100 lb. f.o.b. Montreal, and \$2.50 f.o.b. Cleveland. Car lots of 15 tons, \$2.40 f.o.b. Cleveland.

**Galvanized Wire**—Little or no business this week in galvanized wire. We quote: No. 5, \$3.65; Nos. 6, 7, and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In car lots f.o.b. Cleveland, No 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than car lots 12 1-2c extra per 100 lbs. will be charged.

**Rivets and Burrs**—Quieter than formerly but considerable business doing: Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

**Screws**—These are still in active demand from all quarters. Discounts are: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass flat head, 80 per cent.

**Bolts and Nuts**—No new feature to the market. A fairly good demand. We quote: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

**Cut Nails**—Cut nails are selling well, as a great many are still required for building purposes. We quote as before \$2.30 per keg f.o.b. Montreal, Hamilton, Toronto and St. John.



**Wire Nails**—The conditions that prevailed last week still continue, and there seems no likelihood of an early change. Prices are still being cut and although we quote lower than last week, there is no assurance that these are being followed. We quote: \$2.30 per keg, car lots, and \$2.35 per keg in small lots.

**Pressed Spikes**—There is no new feature in this line. Discount as before 25 per cent.

**Horseshoes**—The demand for horseshoes is still good, while prices remain the same. We quote the following: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

**Horsenails**—Trade continues good. We quote as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. Other brands 55 and 57 1-2 per cent off list.

**Sporting Goods and Supplies**—As mentioned last week, there is every appearance of an unusually big business in sporting goods and supplies for the coming season and dealers are busy preparing themselves for such. The prices of the different lines on application.

**Shot Guns and Rifles**—The advance last week of from 25 to 35 per cent. still holds, but nevertheless a large number of orders are reported and business has a bright outlook.

**Ammunition**—This is in good demand at present. The advance noted in American loaded shells still holds. We quote: Rim fire cartridges, 30 and 21-2 per cent. discount from list; centre fire, 5 per cent advance on list; loaded shells 17 1-2 per cent. discount from list.

**Roofing Pitch**—As has been the case throughout the Summer business in this line is brisk. Price as before, \$1 per cwt.

**Building Paper**—Manufacturers report that business still holds up well in all

lines. Prices remain the same. Our quotations are: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

**Fire Brick**—There is still little doing and no change for the better.

**Cement**—There is a somewhat brighter tendency in the cement market this week, more so than has prevailed throughout the season. A slight weakness in the market is noted, but as yet no change in prices is reported. We quote Canadian cement, \$1.90 to \$2.25; English, \$2.15 to \$2.25; Belgian, \$1.70 to \$1.95 per barrel, ex store, and American, \$2.20 to \$2.40 ex cars.

**Cordage**—The cordage business is a little better this week than last and throughout a fairly good business is being done. The reduction of 5 per cent. on cotton goods still holds. We quote as follows: British pure manila, 11 1-2c; pure manila, 14 1-2c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

## METALS.

Little energy is being shown during the present week in the metal market. There is no business being done in pig iron for import, and very little Canadian stock moving. A decrease of 25 cents is noted in Summerlee this week. Bar iron continues active. The market is weaker and a slight reduction in price is reported. Merchant steel and tool steel continue quiet. The market in Canada plates and black sheets is brisk for Fall shipment, but few orders are reported from local stock. Ingot tin advanced early in the week, but during the last two or three days is slightly weaker. Prices continue the same while the demand is small. Copper remains firm. It is hardly as scarce as last week and the market is brighter and more enquiries are coming in. Pig lead shows a stronger tendency and any variation is towards an advance. While lead, copper, and tin have all fluctuated slightly

during the week the same prices are quoted. Foundries are unusually quiet, consequently the demand for scrap metal is almost at a standstill. There is a small amount of wrought scrap moving. There is not at all a large volume of business being done, but the outlook for the Fall is splendid.

**Pig Iron**—The demand for pig iron continues small. No sales are reported for import and but few of Canadian stock. A decrease of 25 cents is noted in Summerlee this week.

|                                             |                                        |
|---------------------------------------------|----------------------------------------|
| "Disc," No. 1.....                          | \$17.50 delivered Montreal.            |
| "Dom.," No. 1.....                          | 19.50 " "                              |
| Usual difference in price for 1 wcr grad.s. |                                        |
| Ferrona No. 1.....                          | \$18.00 delivered Montreal.            |
| " No. 2.....                                | 17.50 " "                              |
| " No. 3.....                                | 16.50 " "                              |
| " No. 4.....                                | 16.00 " "                              |
| Londonderry.....                            | \$18.50 to \$19.00 delivered Montreal. |
| Summerlee.....                              | 18.50 " "                              |
| Glenarnock.....                             | 20.00 " "                              |
| Gartsherrie.....                            | 19.25 " "                              |
| Carnbroe.....                               | 18.50 " "                              |
| Carron No. 1.....                           | 19.00 " "                              |
| " (special).....                            | 17.50 " "                              |
| Ayresome No. 1.....                         | 17.50 " "                              |
| " No. 3.....                                | 16.00 " "                              |
| Clarence No. 1.....                         | 16.25 " "                              |
| " No. 3.....                                | 16.00 " "                              |

**Bar Iron**—This continues active. The market is slightly weaker at present and a slight reduction in price is noted. We quote: Merchants' bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2; net cash 30 and 15 per cent.

**Tool Steel**—Merely a nominal trade in tool steel this week. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

**Merchant Steel**—Somewhat quieter than last week and in little demand. Our quotations are the following: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.35; machinery (iron finish), \$2; square harrow, \$2.45.

**Canada Plates**—Few sales are reported from local stock, but a large business is being done for Fall shipment. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized, \$4 to \$4.10; galvanized 60s, \$4.25 to \$4.35.

**Black Sheets**—In common with Canada plate, the demand is good, particularly for import orders, but the prices quoted are subject to concessions. We quote the following: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

**Galvanized Iron**—The market continues firm and Autumn business is al-



## ONTARIO MARKETS.

Office of HARDWARE AND METAL,  
10 Front Street E.  
Toronto, August 13, 1905.

ready being done in a large amount. We quote: Queen's Head, 28 gauge, \$4.30; 26 gauge, \$4.05; 22 to 24 gauge, \$3.80; 16 to 20 gauge, \$3.70; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28 gauge, \$4.30. "Windmill Best," 28 gauge, \$4. In less than case lots, 25c extra.

**Sheet Zinc**—Remains unchanged from last week and still shows a weakening tendency. We quote: Case lots at \$6.25 to \$6.50, and small quantities \$6.50 to \$6.75.

**Tin Plates**—These continue firm with no change whatever. Cokes \$3.75 and charcoal \$4.

**Ingot Tin**—Advanced early in the week, but during the last two or three days is slightly weaker. Prices are still subject to concessions for large quantities. Quotations are 30c to 30 1-2c.

**Ingot Copper**—Copper remains firm, there is not the same scarcity that there was last week. The market is brighter and more enquiries are coming in. Quotations are 13 1-2 to 13 3-4c, the former price being for quantities only and is firmly held at that.

**Pig Lead**—Shows stronger tendency. It fluctuated slightly during the week and any variation is towards an advance. Prices are nominally the same. We quote \$3.25 to \$3.35.

**Coil Chain**—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on carlots.

**Scrap Metals and Old Material**—As the foundries are unusually quiet at present, the demand for scrap metal is almost at a standstill. There is a small amount of wrought scrap moving. We quote: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

FOR the holiday season conditions are quite bright on this market. Of course things are quiet, as is to be expected at this time, but business is brisker than is usual for the holiday season. The situation on the wire nail market is the only item that is attracting much attention. Prices are being cut by many dealers while others are trying to maintain the market. Manufacturers are anxious that this cutting in prices should stop, and perhaps something may be done by them to remedy this state of affairs.

The demand for sporting goods is the brightest spot on the market at the present time. Many orders are now coming in for future delivery, especially in the shotgun line. This demand is increasing each week.

Because of an over production of cement in the United States and a consequent flooding of the Canadian market, there has been a drop in Canadian Portland of 10c and a drop of from 30c to 50c in American Portland.

The petroleum market is easier this week. There has been a drop of 1-2c per gallon for both Canadian and American.

Other than those noted there is no change in quotations.

**Shot Guns and Rifles**—The demand for these lines is good already, and is increasing weekly. Especially so is this the case with shot guns. This year prices are somewhat lower than last.

**Ammunition**—There is already a good demand, but as yet not quite so noticeable as in shot guns and rifles. Quotations are: Rim fire cartridges, 30 and 21-2 discount from list; centre fire, 5 per cent. advance on list.

**Harvest Tools**—A steady demand keeps up.

**Washing Machines**—There is very fair demand for this line. We quote: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

**Woodenware**—Reduced prices hold, and a very fair business is being done. Quotations are as follows: Tubs, No. 0, \$11.25; No. 1, \$9.00; No. 2, \$8.00; No. 3, \$7.00; pails No. 1, 2 hoops, \$1.85;

3 hoops, \$2.00; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

**Steel Track Door Hangers**—There is little change in the situation. Business is very fair for this season.

**Chain**—The demand is fair. Prices are quoted as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

**Step Ladders**—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

**Barb Wire**—The demand is falling off gradually, but there is still a very fair amount of business being done. We quote as follows: \$2.75 per 100 lbs. f. o. b. Toronto and \$2.50 f. o. b. Cleveland. Carlots of 15 tons, \$2.40 f. o. b. Cleveland.

**Galvanized Wire**—A fair trade continues at unchanged prices. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 12, \$2.60; No. 13, \$2.70; land, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs. extra charged.

**Coiled Spring Wire**—There are sorting orders coming in all the time. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

**Wire Nails**—As yet no definite steps have been taken by manufacturers to stop the cutting in prices by some jobbers on the wire nail market. A few of the jobbers are trying to maintain the market as it should be. Quotations are \$2.45 per keg f.o.b. Toronto, with carlots \$2.40.

**Cut Nails**—A moderate trade doing, with prices steady at \$2.30 per keg f. o. b. Toronto and Hamilton.

**Horseshoes**—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20;



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CANADIAN, ENGLISH,  
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FIRE BRICKS, FIRE CLAY,  
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BUILDING BRICKS.  
SEWER PIPES, CULVERT PIPES,  
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FOUNDERS' and CON-  
TRACTORS' SUPPLIES.

### F. HYDE & CO.

WELLINGTON ST., MONTREAL

## Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

## CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

## "MIDLAND"

BRAND

## Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

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**Drummond McCall & Co.**

MONTREAL, QUE.

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MIDLAND, ONT.

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We invite inquiries for

## Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,  
CANADA PLATES, TINPLATES, WIRE ROPE  
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS  
ORE BAGS, GRAIN BAGS, ETC.

**C.F. JACKSON & CO., Limited**

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,  
and LIVERPOOL, ENGLAND.

featherweight, all sizes, 0 to 4, \$5.50;  
toe weight, all sizes, 1 to 4, \$6.75. If  
shipped from factory 15c less.

**Horsenails**—Business is fairly good  
in this line. Prices remain unchanged.  
Quotations are: "C" brands, 40  
10 and 7 1-2 per cent.; other brands 55  
and 57 1-2 per cent.

**Screws**—A very steady demand keeps  
up. Prices are unchanged. We quote:  
Flat head bright, 87 1-2 per cent. dis-  
count; round head bright, 82 1-2 per  
cent.; flat head brass, 80 per cent.;  
round head brass, 75 per cent.; round  
head bronze, 70 per cent.; flat head  
bronze, 75 per cent.

**Rivets and Burrs**—A steady and brisk  
demand continues. Prices remain un-  
changed. We quote: Iron rivets, 60 and  
10 per cent. discounts; iron burrs, 55 per  
cent.; copper rivets, with usual propor-  
tion of burrs, 45 per cent.

**Bolts and Nuts**—A very fair demand  
is reported by all dealers. Prices are  
steady. We now quote: Carriage bolts,  
common (\$1 list), 3-8 diameter and  
smaller, 60 and 10 per cent.: 7-16 and  
up, 55 and 5 per cent.; carriage bolts,  
full square (\$2.40 list), 60 per cent.;  
carriage bolts, Norway iron (\$3 list),  
60 per cent.; machine bolts, 3-8 and less,  
60 per cent.; 7-16 and up, 55 and 5 per  
cent.; coach screws, cone points, 70 and  
5 per cent.; plow and blank bolts and  
bolt ends, 55 and 5 per cent.; sleigh-  
shoe bolts, 70 per cent.; nuts, hex., all  
sizes, 4 1-4c per lb.; square, 4c per  
lb.

**Cordage**—There is a good demand on  
the market this week, although for bin-  
der twine the demand is slackening.  
Prices remain unchanged at last week's  
quotations, which are: Sisal 10 1-4c;  
standard, 10 1-4c; standard ma-  
nila (550 feet), 11 1-4c; manila  
(600 ft.), 12 1-4c; pure manila (650 ft.),  
13 1-4c. Five-ton lots 1-8c less. Carload  
lots 1-4c less. Prices on other lines are  
as follows: Pure manila, 14 1-2c; Brit-  
ish pure manila, 11 1-2; sisal, 11  
double lath yarn, 10 1-2c; single lath yarn,  
10c; double shingle yarn, 10 1-2c; single  
shingle yarn, 10c; sasheord, "Herecules,"  
30 to 32c; "Star," 36 to 38c; cot-  
ton rope, 3-16 inch and up, 20 1-2  
to 22c; 5.32 inch, 25 to 27c; 1-8 inch,  
25 to 28c; cotton twine, 3 ply, 24c; 4  
ply, 29c; calking cotton, 16 1-2 to 17c;  
cotton waste, colored, 6 3-4c; white, 11  
to 13c.

**Building Paper**—The demand is good  
and trade is brisk for this time of the

## Sheet Zinc Sheet Copper

and other Metals.

From Stock or for Import.

### A. C. LESLIE & CO.

509-512 Merchants Bank Building.

MONTREAL.

A Good Iron Pipe like the

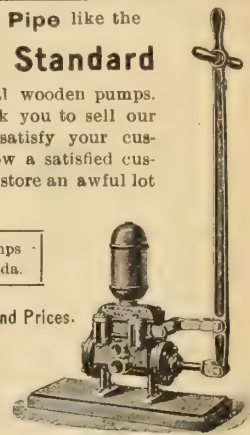
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will outwear several wooden pumps.  
That's why we ask you to sell our  
STANDARD. They satisfy your cus-  
tomer, and you know a satisfied cus-  
tomer can do your store an awful lot  
of good.

McDougall Pumps  
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## "ALPHA"

### HIGH SPEED STEEL

Crucible Cast Steel  
for Tools of all kinds.

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D. W. CLARK, P.O. Box 520, Toronto

## NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

## Ferrona Pig Iron

And SIEMENS MARTIN

### OPEN HEARTH STEEL



building season. Prices are still unchanged. We quote the following: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

**Fire Bricks**—This market continues rather quiet. Prices are unchanged. Our quotations are as follows: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade, 32 1-2 to 40c.

**Cement**—Conditions on this market are somewhat easier this week, not because of a decrease in demand, but because of an over production in the States and a consequent flooding of this market with the product. Prices have dropped a little because of it. Canadian Portland has dropped 10c, while American Portland has dropped 30 to 50c. Changed quotations are as follows: Canadian Portland \$1.70 to \$2; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2; ex-store; American Portland, \$1.80 to \$2.10 f. o. b. Toronto.

#### METALS.

Conditions on the metal market remain very stationary. Things are very quiet, caused presumably by the holiday season. There is always a mid-summer lull in the market, but it is quieter this year than usual. However the outlook for the future is quite bright. The Fall market, however, depends to a very great extent upon the results of the crops in Ontario and Manitoba. There are no changes in quotations since last week.

**Pig Iron**—In unison with the general metal market this market is quiet. Buyers are still a little afraid of the market. The usual mid-summer quietness is, however, prevailing. In England Middlesboro is advancing, but the advance has had no effect on the local market. Pig iron is being purchased in car lots. Quotations are unchanged as follows:

|                                   |            |         |
|-----------------------------------|------------|---------|
| Middlesboro, f.o.b., Toronto..... | \$17 50 to | \$18 75 |
| Hamilton, No. 1 .....             | 17 00 to   | 17 75   |
| " No. 2 .....                     | 16 25 to   | 16 55   |
| " No. 1, Hamilton .....           | 17 50 to   | 17 70   |
| Midland, No. 1 .....              | 17 00 to   | 17 20   |
| " No. 2 .....                     | 16 00 to   | 16 55   |
| " No. 1 f.o.b. Midland.....       | 17 05      | 27 05   |
| Radnor, f.o.b. furnaces.....      | 16 50 to   | 17 05   |
| Londonderry, f.o.b. furnaces..... |            |         |

**Bar Iron**—A good business is being done, and prices are firmly maintained. We quote \$1.75 f. o. b. Toronto, with

## NICHOLSON FILES

Are known all over the World.

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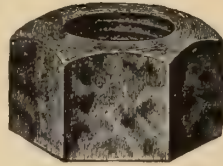
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SIX FACTORIES PRODUCING DAILY 120,000.

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PRICES RIGHT.

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### THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of  
Set and Cap Screws, Special Milled Work, Engine Studs  
Etc. Cold Punched Nuts of every variety of finish.  
INGERSOLL, ONT.

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MANUFACTURERS WISHING TO BE REPRESENTED IN

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### DAVID PHILIP, Manufacturers' Agent

References Furnished.

470 Main St., Baker Block, WINNIPEG, MAN.



discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

**Steel**—A very good demand is reported, and prices are steady. Quotations as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high

speed, 65 to 75c; "Self Hardening," 45 to 50c.

**Tin**—Prices remain unchanged. The market is quiet. Quotations are from 30c to 31c.

**Galvanized Sheets**—There is a very fair demand. The margin, however is very close. We quote as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

**Tin Plates**—There is a very good demand, with prices unchanged. Stocks are light. We quote the following:

TURNED  
29 1904  
Boh 28  
Page 4  
this



# **“EMPIRE”**

(bulk)

## **Smokeless Sporting Powder**

This European favorite, made by the Nobels', has, though but recently introduced here, taken a commanding position through its high velocity, low pressure and uniformity. “Empire” does not need a special cap.

*For sale by your jobber  
at the same price as the best  
American brands.*

**HAMILTON POWDER CO., Agents**



We Make

# SHEET METAL BUILDING MATERIALS

of all kinds, **Unsurpassed in Quality.** Our goods obtained the **highest award** in competition with the world at the **Paris Exposition**, and were awarded a **Gold Medal** at **Toronto Exhibition, 1902-3.**

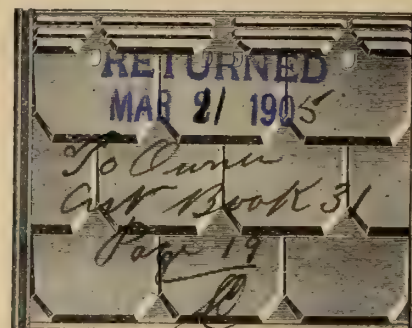
**Our Steel Ceilings are very Artistic.**



They are embossed with great precision and delicacy.

**Don't miss our Exhibit in the Manufacturers' Building at the Canadian National Exhibition**

**Eastlake Steel Shingles are the Best.**



They are more easily applied and will last longer than others.

It pays to handle only **GOODS THAT GIVE PERFECT SATISFACTION.**

**The Metallic Roofing Co., Limited**  
**Toronto Montreal Winnipeg**

Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

**Canada Plates**—There is an improving demand. Prices are unchanged. We quote: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

**Copper**—Ingot copper is quiet, but sheets active. Prices are steady, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

**Brass**—Conditions are unchanged. There is a fair demand, with discount steady at 15 per cent.

**Lead**—There is a good demand with prices very firm. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

**Zinc Spelter**—There is a stronger demand. Buying is active at 5 3-4 to 6c per lb.

**Solder**—There is a fair trade. Prices are 1-2c lower. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

**Antimony**—Market is quiet. Quotations are: 7 1-2 to 8c per lb.

**Old Material**—Market is still dull. This is partly due to the market being

flooded with old material after the recent fire here. The demand for old iron is practically at a standstill. Few changes have taken place during the week. Our quotations are: Heavy copper and wire 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 9 1-4c per lb.; heavy yellow brass, 7 to 8c per lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.20 to \$2.40 per cwt.; scrap zinc 2c per lb.; iron, No. 1 wrought, \$8 to \$9; No. 2 wrought, \$2; machinery cast scrap, \$11; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 4 to 4 1-2c per lb.; country mixed rags, 60c per 100 lbs.

**Petroleum**—Conditions on this market have become a little easier during the week. Demand still continues good. Canadian water white has dropped 1-2c, as has also American. Quotations are: Canadian water white, 17 1-2c; Canadian prime white, 16c; American water white, 18 1-2c, ex-warehouse.

## Hides, Tallow, Skins and Wool.

During the week under review the hide market still remains very strong, with a scarcity of hides. Wool is very strong with no supplies. While on the other hand the tallow market is very weak.

Trade is brisk and the outlook is good. Our quotations are as follows.

## HIDES

|                       |          |
|-----------------------|----------|
| No. 1 green, per lb.  | 0 08 1/2 |
| " 2 " " "             | 0 08     |
| " 1 " steers, per lb. | 0 09     |
| " 2 " " "             | 0 08     |

## CALFSKINS.

|                                          |           |
|------------------------------------------|-----------|
| Veal skins, No. 1, 6 to 12 lb. inclusive | 0 10      |
| " " " 2 " 12 to 15 lb. "                 | 0 08      |
| " " " 1 " 15 to 20 lb. "                 | 0 09      |
| " " " 2 " " "                            | 0 07      |
| Deacons (dairies), each                  | 0 65      |
| Sheep skins                              | 1 00 1 25 |
| Lamb skins                               | 0 50      |
| Shearlings                               | 0 45      |

## TALLOW.

|                          |               |
|--------------------------|---------------|
| Rendered Tallow, per lb. | 0 04 0 04 1/2 |
|--------------------------|---------------|

## WOOL.

|                                |               |
|--------------------------------|---------------|
| Unwashed wool, per lb.         | 0 11 1/2 0 13 |
| Fleece wool, new clip, per lb. | 0 19 0 20     |
| Pulled wools, super, per lb.   | 0 19 0 21     |
| " " extra "                    | 0 21 0 23     |

## PITTSBURG METAL MARKET.

From the Iron Trade Review, Aug. 11, 1904.

THE conversion contract taken by the Republic Iron & Steel Co. last week, which calls for the delivery of 110,000 tons of Bessemer billets to the Pittsburgh Steel Co. in the next ten months, threatens to disrupt the billet association. A meeting was held in this city yesterday at which the matter was discussed, and further meetings are to be held this week. There have been reports in the trade for many months of



# WINDOW GLASS

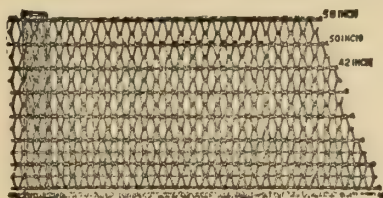
We now have a large and complete assortment of Window, Plate and Ornamental Glass on hand, and are in a better position than ever to serve you. Prompt shipment, close prices. Write us for further particulars.

**G. F. STEPHENS & CO., LIMITED**  
WINNIPEG AND CALGARY

## Galvanized Woven Wire Fences



*American Field and Hog Fence.*



*Ellwood Field and Lawn Fence.*



*Tension Curves and Hinge Joints.*

### High Carbon Steel Wire

Best and cheapest on earth.

Used all over the World by Farmers, Railroads and Parks.  
See our exhibits at all the great Fairs.

MANUFACTURED BY

**The Canadian Steel & Wire Co.,**  
Limited.

Hamilton, Ontario.

Winnipeg, Manitoba.



the flexibility of the billet association prices and it is generally believed that the elastic limit has about been reached. With independent manufacturers constantly taking business at from \$1 to \$2 below association prices or assenting to any kind of a reasonable conversion arrangement, the attempt of the leading producers to maintain the present fictitious basis is regarded as farcical.

On the strength of the Pittsburg Steel contract efforts have been made during the week to boom the market in general, the boomers losing sight of the fact that this order does not mean any new business but that it is merely turning business from the United States Steel Corporation to another producer.

A meeting of the leading wire interests was held in Chicago last Thursday and Friday. All the leading interests, including the American Steel & Wire Co., Kelly Iron & Nail Co., Alabama Steel & Wire Co. and the Pittsburg Steel Co., and excepting the Colorado Fuel & Iron Co., being represented. During the past three months concessions ranging from \$1 to \$2 per ton have been granted to large jobbers, and the lowest prevailing quotation, which is a reduction of \$2 a ton from the last official price, was named as the new base. With the Fall demand coming on it is believed that this new price can be maintained, although the absence of the Colorado Fuel & Iron Co. from the meeting threatens trouble in the West. On iron cut nails concessions of \$1 a ton are reported, and while the base is \$1.75 to jobbers the prevailing price is \$1.70 on both steel and iron.

**Pig Iron**—The lowest price at which Bessemer can now be had is \$12 at the furnace, and while brokers who have been buying heavily on speculation are trying to force the market up to \$12.25 to \$12.50, considerable \$12 iron continues to be offered. On forge iron \$12 Pittsburg can still be done, while sales of small lots of No. 2 foundry have been reported at \$12.65 Pittsburg. Several leading Southern interests have advanced prices on all grades below No. 2 25c a ton, making forge \$8.75 Birmingham. On No. 2 foundry \$9.50 is asked by nearly all the producers, although \$9.25 might be done. On August 1, of a total of 185 furnaces tributary to the Lake Superior ore region, and having a daily capacity of 53,600 tons, 100 were operative and 85 idle. The idle capacity amounts to 41 per cent. Since July 1 the increase in the idle capacity is 6 per cent. The following table shows the idle capacity thus far this year on the first of each month:

|               | Per cent. |
|---------------|-----------|
| January.....  | 64½       |
| February..... | 38        |
| March.....    | 28        |
| April.....    | 14½       |
| May.....      | 10½       |
| June.....     | 20        |
| July.....     | 35        |
| August.....   | 41        |

From present indications a better showing will be made on September 1, when the idle capacity promises to be about the same as that on July 1. We revise quotations as follows:

|                               |            |         |
|-------------------------------|------------|---------|
| Bessemer, Valley.....         | \$12 00 to | \$12 25 |
| Bessemer, Pittsburg.....      | 12 85 to   | 13 10   |
| No. 1 Foundry.....            | 13 00 to   | 13 25   |
| No. 2 Foundry.....            | 12 65 to   | 12 85   |
| Gray forge, Pittsburg.....    | 12 00 to   | 12 15   |
| Chilled basic, Valley.....    | 11 75 to   | 11 95   |
| Chilled basic, Pittsburg..... | 12 60 to   | 12 75   |

**Steel**—Agreed prices, which by no means represent the market, are as follows: Bessemer and open hearth billets, 4x4 inches, and slabs up to and including 0.25 carbon, \$23 Pittsburg, Wheeling, Valley, Johnstown, Ashland, Ky., Ironton, O., and Lorain, O.; 0.26 and including 0.60 carbon, \$1 advance; and 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 3-7-8 inches and sheets and tin bars are \$1 per ton extra. Bessemer and open hearth rods are quoted at \$28 to \$28.50 Pittsburg.

**Plates**—The market continues quiet and new business is light. On sizes up to 60 inches in width made by numerous mills outside of the plate association concessions ranging from \$3 to \$4 per ton are reported. Agreed prices are as follows: Tank plates, 1-4 inch thick and up to 100 inches in width, 1.60c at mill, Pittsburg; flange and boiler steel, 1.70c; marine, ordinary firebox, A.B.M.A. specifications, 1.80c; still bottom steel, 1.85c; locomotive firebox, not less than 2.10c, and it ranges in price to 3c. Plates, more than 10 inches, 5c extra 100 pounds. Plates 3-16 inch in thickness, \$2 extra; gauges Nos. 7 and 8, \$3 extra. These quotations are based on carload lots with 5c extra a hundred pounds for less than carload lots. Terms, net cash in 30 days.

**Bars**—There is very little shading on steel bars, prices being too low for any of the independent mills to pay association prices for billets, and shade the agreed prices on the finished material. Specifications, are somewhat heavier, but no great improvement is looked for until next month. The bar iron market continues quiet. We make the following quotations: Bar iron, 1.25c to 1.30c Pittsburg for local delivery, while for Western shipments quotations are based on 1.25c to 1.35c Pittsburg. Hoops are held at 1.55c base, and bands at 1.35c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open hearth, \$1.40c; plow beams and cultivator beams, 1.35c net; channels, angles, tees and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 pounds of a size, not less than 1,000 pounds, 10 cents advance; less than 1,000 pounds of a size, 30 cents advance.

**Sheets**—The demand for sheets is improving slightly, and prices remain stationary. Our quotations on black sheets, one pass, are as follows: No. 8, 1.60c; No. 9, 1.56c; Nos. 12 to 14, 1.70c; Nos. 15-17, 1.75c to 1.80c; Nos. 18-21, 1.85c to 1.90c; Nos. 22-24, 1.95c; Nos. 25-26, 2c; No. 27, 2.05c; No. 28, 2.10c to 2.15c; No. 29, 2.35c to 2.40c; No. 30, 2.50c to 2.55c. Galvanized: Nos. 12-17, 2.20c to 2.25c; Nos. 18-21, 2.35c to 2.40c; Nos. 22-24, 2.50c to 2.55c; Nos. 25-26, 2.65c to 2.70c; No. 27, 2.90c; No. 28, 3.10c; No. 29, 3.45c to 3.50c; No. 30, 3.85c to 3.90c.

**Wire and Wire Nails**—On cut nails, while the official price is \$1.75, the prevailing price for both steel and iron is \$1.70. We revise quotations as follows: Wire nails, carload lots to jobbers, f.o.b. cars Pittsburg, \$1.80 base; plain wire, carload lots, \$1.70 base; barb wire, carload lots, \$2.10 base; staples, carload lots, \$1.95 keg. Galvanized 30 cents extra. Carload lots to retailers are held at 5 cents advance in all lines, and on less than carload lots a further advance of 10 cents is charged. Steel and iron cut nails, carload lots, \$1.70, and less than carload lots, \$1.75 f.o.b. Pittsburg, plus freight to point of destination.

**Merchant Steel**—The market in nearly all lines is quiet, although several large shafting orders for Southern mills have recently been taken by the leading local producer. We make the following quotations: Toe calk, 1.90c; carriage spring steel, 1.75c; tire steel, 1.55c to 1.60c; plow steel, 6 inches and under, 1.35c for Bessemer and open hearth; plow slabs, 3-4 inch and heavier, 1.60c. Drawn and cold rolled shafting is held at 52 per cent. off in carload lots and 47 off in less than carload lots.

**Old Material**—We note the sale of 1,000 tons of heavy melting stock at \$11.50, gross ton, Pittsburg. Rerolling rails have been offered by leading railroad interests in large tonnages in the past ten days, one road having disposed of 1,200 tons at \$11.50.

**Coke**—On furnace coke for delivery during the present month \$1.35 can still be done, but for delivery during the last four months \$1.40 and \$1.45 is quoted. One contract for 80,000 tons of furnace coke for delivery to next July was placed at a shade under \$1.50. This is by far the lowest price yet named or such extended delivery. On foundry coke \$1.80 to \$1.85 is quoted, while a few producers are receiving more than \$2 for their product. While a large number of ovens in the Connellsville region have been blown in during the past week, the banking of more than 700 more than balanced the ones put in blast. In the upper region 9,782 ovens are still idle while the lower region reports 1,125. This is an idle capacity of close to 40 per cent. The production of the upper region during the week ending Saturday, July 30, amounted to 154,984 tons, while the lower region produced 54,098 tons.



WE SUPPLY NEARLY EVERYTHING USED IN BUILDING

**Paints, Oils, Varnishes**

Plate, Window and Fancy Glass.

Ornamental Glass Work a Specialty.

We have our own plant for

BEVELLING, SILVERING, SANDCUTTING and EMBOSSING.

**Burlaps, Decorative Cloths, Artists' Materials**

**PORTLAND CEMENT, FIRE BRICK**

**SASH, DOORS, MOULDINGS,**

All kinds of ROUGH and DRESSED LUMBER.

INTERIOR FINISH, OFFICE AND BANK FITTINGS.

GILMOURS DOORS. "ELECTRIC," MAPLE FLOORING

**THE WINNIPEG PAINT AND GLASS CO., LIMITED**

179-181 Notre Dame Ave East., - - - WINNIPEG

## 16 Years Ago

we done all our business in a room about 12 feet square.

## To-Day

we have the largest and best equipped factory of its kind in Canada. Over 20,000 square feet of floor space.

Our business has been built up on trustworthy goods at reasonable prices.

## Let Us!

look after your next order for

Tents, Awnings, Sails, Flags, Waterproof Horse or Wagon Covers, Waterproof Clothing, Horse Blankets, Surcingles, Pack Sacks, Coal Bags, Nose Bags, Binder or Cheese Covers, Rugs, Camp Furniture, etc.

You will be pleased with our promptness.



**J. J. TURNER & SONS,** PETERBOROUGH ONT., CANADA

CABLE ADDRESS,  
Turners, Peterborough, Canada.

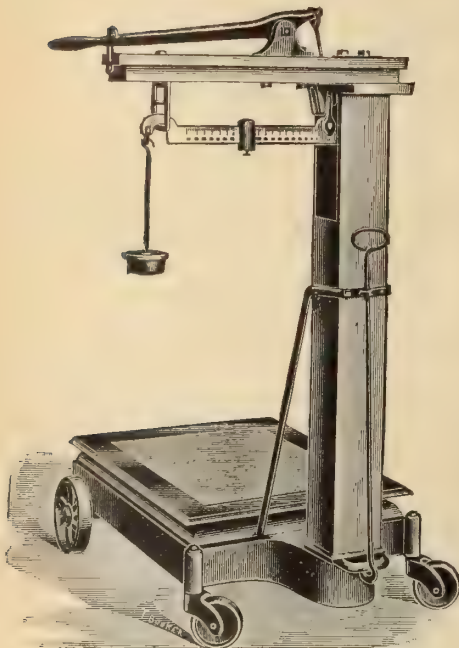
LONG DISTANCE TELEPHONES,  
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## HARDWARE CONDITIONS IN MANITOBA.

# The Burrow, Stewart & Milne Co.'s "Champion Jewel" Scales



FITTED WITH SWIVEL CASTERS.

Can be turned without lifting in their own length, even when heavily weighted.

Far Superior to any Truck or Wagon scale (the weighing results of some of which are little better than a guess).

Thoroughly reliable and accurate.

WRITE FOR PRICES AND DETAILS.

## MERRICK, ANDERSON & CO.

NORTHWEST DISTRIBUTORS,  
WINNIPEG.

THE great Dominion Fair is now over, and all the exhibits are being quickly moved away. Trade for the past week has been lively and bright, and all markets are fairly steady with little or no change in prices of any note. We quote:

|                             |        |
|-----------------------------|--------|
| Barbed wire, 100 lb.        | \$3 15 |
| Plain galvanized.....6 to 8 | 3 39   |
| ".....9                     | 2 50   |
| Plain galvanized.....10     | 3 50   |
| ".....12                    | 3 10   |
| ".....13                    | 3 20   |
| ".....14                    | 3 90   |
| ".....15                    | 4 45   |
| ".....16                    | 4 60   |
| Plain twist.....            | 3 15   |
| Staples.....                | 3 65   |
| Oiled annealed wire.....10  | 3 42   |
| ".....11                    | 3 48   |
| ".....12                    | 3 56   |
| ".....13                    | 3 66   |
| ".....14                    | 3 76   |
| ".....15                    | 3 91   |

Annealed wires (uncoiled) 100. less.

|                                       |        |
|---------------------------------------|--------|
| Horseshoes, iron, No. 0 to No. 1..... | \$4 75 |
| No. 2 and larger.....                 | 4 45   |
| Snow shoes, No. 0 to No. 1.....       | 4 60   |
| No. 2 and larger.....                 | 4 45   |
| Steel, No. 0 to No. 1.....            | 4 45   |
| No. 2 and larger.....                 | 4 20   |

|                                           |      |
|-------------------------------------------|------|
| Horsenails, No. 4—1½ in., list price..... | 0 48 |
| " " 5—2 " ".....                          | 0 32 |
| " " 6—2½ " ".....                         | 0 28 |
| " " 7—2½ " ".....                         | 0 24 |
| " " 8—2½/8 " ".....                       | 0 22 |
| " " 9—2½ " ".....                         | 0 20 |
| " " 10—2½ " ".....                        | 0 20 |
| " " 11—2½ " ".....                        | 0 20 |
| " " 12—2½ " ".....                        | 0 20 |
| " " 14—3½ " ".....                        | 0 20 |

Discount on these prices 40, 10, 7½ per cent., plus 15c. per box.

| Cut Nails—             | Wire Nails—    |
|------------------------|----------------|
| 2d 1 in.....\$4 10     | 1 in.....4 15  |
| 3d Fin. 1½ in.....4 10 | 1½ in.....4 10 |
| 3d 1½ in.....3 75      | 1½ ".....3 70  |
| 4d 1½ in.....3 50      | 1½ ".....3 50  |
| 5d 1½ in.....3 50      | 1½ ".....3 50  |
| 6d 2 in.....3 40       | 2 ".....3 40   |
| 8d 2½ in.....3 25      | 2½ ".....3 25  |
| 10d 3 in.....3 20      | 3 ".....3 20   |
| 20d 4 in.....3 15      | 3½ ".....3 15  |
| 30d 4½ in.....3 10     | 4 ".....3 10   |
| 40d 5 in.....3 10      | 4½ ".....3 10  |
| 50d 5½ in.....3 10     | 5 ".....3 10   |
| 60d 6 in.....3 10      | 5½ ".....3 10  |
|                        | 6 ".....3 10   |

|                                                              |          |
|--------------------------------------------------------------|----------|
| Bar iron (basis).....                                        | 2 50     |
| Swedish iron (basis).....                                    | 4 75     |
| Sleigh shoe steel.....                                       | 2 85     |
| Spring steel.....                                            | 3 25     |
| Machinery steel.....                                         | 3 50     |
| Tool steel, Black Diamond, 100 lb.....                       | 8 50     |
| Jessop.....                                                  | 13 00    |
| Sheet iron, black, 10 to 16 gauge, 100 lb.                   | 3 50     |
| 18 to 22 gauge.....                                          | 3 75     |
| 24 gauge.....                                                | 3 90     |
| 26 gauge.....                                                | 4 00     |
| gauge.....                                                   | 4 10     |
| Galvanized Iron, Apollo, 16 gauge.....                       | 4 00     |
| 18 and 20 gauge.....                                         | 4 00     |
| 22 and 24 gauge.....                                         | 4 25     |
| 26 gauge English or 28 American.....                         | 4 25     |
| 28 gauge.....                                                | 4 50     |
| 30 gauge or 10½ oz.....                                      | 4 75     |
| Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.  |          |
| Queen's Head, 24 gauge.....                                  | 4 25     |
| 26 gauge.....                                                | 4 50     |
| 28.....                                                      | 4 75     |
| Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb. |          |
| Genuine Russian, per lb.....                                 | 11       |
| Imitation ".....                                             | 07 to 08 |
| Tinned, 24 gauge, 100 lb.....                                | 8 00     |
| 26 gauge.....                                                | 8 05     |

Office of HARDWARE AND METAL  
Room 308 McIntyre Block,  
Winnipeg, Aug. 8, 1904.

|                                             |                  |
|---------------------------------------------|------------------|
| Tinplate, IC charcoal, 20 x 28, box....     | 9 50             |
| " IX.....                                   | 11 50            |
| " IXX.....                                  | 13 50            |
| Ingot tin.....                              | 35               |
| Canada plate, 18 x 21, 18 x 24 and 20 x 28. | 3 05             |
| Canada plate, full polished.....            | 3 75             |
| Sheet zinc, cask lots, 100 lb.....          | 7 00             |
| Broken lots.....                            | 7 50             |
| Pig lead, 100 lb.....                       | 5 50             |
| Black iron pipe, ¾ inch.....                | ....             |
| " ¾ ".....                                  | 2 80             |
| " ¾ ".....                                  | 3 25             |
| Black iron pipe, ¾ inch.....                | 4 20             |
| " 1 ".....                                  | 5 85             |
| " 1½ ".....                                 | 8 20             |
| " 1½ ".....                                 | 10 00            |
| " 2 ".....                                  | 14 00            |
| Rope, sisal, 7-16 and larger, basis.....    | ....             |
| Manila, 7-16 and larger, basis.....         | 15 25            |
| Lathyrum.....                               | 11 25            |
| Solder.....                                 | 20               |
| Axes, chopping.....                         | \$ 6 75 to 12 00 |
| " double bits.....                          | 12 00 to 18 00   |
| Bluestone.....                              | 5 25             |
| Screws, flat head, iron, bright.....        | .85 and 10 p.c.  |
| Round ".....                                | 80 p.c.          |
| Flat " brass.....                           | .75 and 10 p.c.  |
| Round ".....                                | .70 and 10 p.c.  |
| Coach.....                                  | 70 p.c.          |
| Bolts, carriage, ¾ or smaller.....          | .60 and 5 p.c.   |
| " 7-16 and up.....                          | 55 p.c.          |
| Bolts, machine, ¾ and under.....            | .55 and 5 p.c.   |
| " 7-16 and over.....                        | 55 p.c.          |
| Bolts, tire.....                            | .60 and 5 p.c.   |
| Bolt ends.....                              | .55 and 5 p.c.   |
| Sleigh shoe bolts.....                      | 70 p.c.          |
| Machine screws.....                         | 70 p.c.          |
| Plough bolts.....                           | .55 and 5 p.c.   |
| Square nuts, case lots.....                 | .3c. discount.   |
| " small lots.....                           | .2½ c.           |
| Hex " case lots.....                        | .3c.             |
| " smaller lots.....                         | .2½ c.           |
| Rivets, iron.....                           | .50 and 10 p.c.  |
| Copper, No. 8.....                          | 32               |
| No. 12.....                                 | 36               |
| Coil chain, 3-16 inch.....                  | 9½               |
| " ¼ inch.....                               | 7½               |
| " 5-16 inch.....                            | 5½               |
| " ¾ inch.....                               | 5½               |
| " 7-16 inch.....                            | 4½               |
| " ¾ inch.....                               | 4½               |
| " ¾ and ¾ inch.....                         | 4                |
| Spades and shovels.....                     | .40 and 5 p.c.   |
| Harvest tools.....                          | 60 p.c.          |
| Axe handles, turned, s.g. hickory, doz..... | \$3 15           |
| No. 1.....                                  | 1 90             |
| No. 2.....                                  | 1 60             |
| Octagon extra.....                          | 2 30             |
| No. 1.....                                  | 1 60             |
| Files common.....                           | 70 and 10 p.c.   |
| Diamond.....                                | 60 p.c.          |
| Building paper:                             |                  |
| Anchor, plain.....                          | 65c.             |
| " tarred.....                               | 70c.             |
| Pure fibre, plain.....                      | 67½ c.           |
| " tarred.....                               | 80c.             |
| Ammunition, cartridges, Dominion R.F.       | 50 p.c.          |
| Dominion, C.F., pistol.....                 | 30 p.c.          |
| " military.....                             | 15 p.c.          |
| American R.F.....                           | 30 p.c.          |
| C.F. pistol.....                            | 5 p.c.           |
| C.F. military.....                          | 10 p.c. advance. |
| Loaded shells:                              |                  |
| Eley's soft, 12 gauge black.....            | 15 00            |
| chilled, 12 gauge.....                      | 10 00            |
| soft, 10 gauge.....                         | 18 00            |
| chilled, 10 gauge.....                      | 19 00            |
| Shot, Ordinary, per 100 lb.....             | 6 00             |
| Chilled.....                                | 6 55             |
| Powder, F.F., keg.....                      | 4 70             |
| F.F.G.....                                  | 5 00             |
| Tinware, pressed, retinned.....             | 70 and 10 p.c.   |
| " plain.....                                | 75 and 2½ p.c.   |
| " pieced.....                               | ....             |
| Japanned ware.....                          | .37½ p.c.        |
| Enamelled ware, white.....                  | 45 p.c.          |
| " Famous.....                               | .50 and 10 p.c.  |
| Imperial.....                               | .50 and 10 p.c.  |
| Green Wire Cloth.....                       | 1 55             |



# From the Start to the Finish

we are particular to see that every piece of material and the workmanship is the best that can be, the result naturally being that the demand for



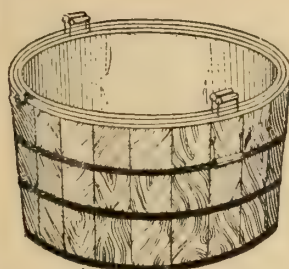
## BOECKH'S

Standard Brushes  
and Brooms

## BRYAN'S

London Brushes

AND



## CANE'S

Newmarket  
Pails, Tubs, Wash Boards  
and Clothes Pins



is increasing rapidly. You help yourself as well as us by stocking these lines, as they are ready sellers and trade winners every time. Being standard goods all reliable wholesale jobbing houses keep them in stock, and will supply you with our catalogue for the asking.

# UNITED FACTORIES, LIMITED

OPERATING:

BOECKH'S TORONTO FACTORIES

BRYAN'S LONDON FACTORIES

CANE'S NEWMARKET FACTORIES

HEAD OFFICE

Toronto, Ont.



## PETROLEUM.

|                            |       |
|----------------------------|-------|
| Water white American ..... | 27½c. |
| Prime white American ..... | 25½c. |
| Water white Canadian ..... | 25½c. |
| Prime white Canadian ..... | 24½c. |

## SCRAP.

|                              |               |
|------------------------------|---------------|
| No. 1 cast iron .....        | \$14 to 15    |
| No. 2 " .....                | 7             |
| Wrought iron scrap .....     | 5             |
| Copper (heavy) .....         | 8½c. per lb.  |
| Yellow brass (heavy) .....   | 7½c. "        |
| Light brass .....            | 5c. to 6c. "  |
| Lead pipe, or tea lead ..... | 2c. to 2½c. " |
| Zinc scrap .....             | 1c. "         |

## PAINTS, OILS AND GLASS.

|                                                  |                  |
|--------------------------------------------------|------------------|
| White lead .....                                 | \$6 00 to \$6 50 |
| Putty in bladder, 2½ lb. in keg of 100 lbs. .... | 0 02½            |
| Turpentine, pure, in barrels .....               | 0 87             |
| Less than barrel lots .....                      | 0 92             |
| Linseed oil, raw .....                           | 0 55             |
| Boiled .....                                     | 0 58             |

## WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

|                                              |                |
|----------------------------------------------|----------------|
| Lubricating oils, heavy castor machine ..... | 0 29           |
| " " extra engine .....                       | 0 27           |
| " " dynamo .....                             | 0 35           |
| " " black .....                              | 0 22           |
| " " cylinder .....                           | \$0 50 to 0 75 |
| (as to quality)                              |                |

|                                   |              |
|-----------------------------------|--------------|
| Harness oil .....                 | 0 50 to 0 60 |
| Neatsfoot oil .....               | 1 00         |
| Vegetable oil, 1st pressure ..... | 1 00½        |
| " 2nd pressure .....              | 1 09½        |

## TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of **HARDWARE AND METAL**.

Vancouver, B. C., Aug. 5, 1904.

**T**HE hardware trade in this province continues active, but no changes of importance are noted either in conditions or prices. The building in Vancouver and the steady increase in the development of the mining and lumbering industries of the province create a good demand for all lines. Boat building is carried on to a large extent, and the large number of small steamers and launches that are constantly being built are fitted with engines and boilers local made.

• • •

There is some excitement in the city because of the news about the oil boring operations at Steveston. It has been stated that the pressure has become so strong in the boring, which is now down 930 feet, that the capping and plug at the mouth of the pipe were blown clear from the opening, and water shot up 40 feet into the air. The water is up to within fifteen feet of the top of the piping, the pressure of the gas in the pipe being 88 lbs. to the square inch, and it is obvious that the pressure of gas from below must have been immense to cause such results. The value of the occurrence lies in the fact that such extreme pressure is invariably found when oil is within measurable distance of being struck, the indications being almost identical with those at the big oil strike at Beaumont, Texas. It is a Texas expert who is in charge of the work here, Mr. Thomas Davis, who was so pleased with his initial observations that he formed one of the companies now doing the boring.

The boring is on the property of the Richmond Oil Co., and the 925 feet, to

which depth the pipe now is, is of eight-inch, while six inch pipe will be driven through the bedrock.

\* \* \*

Figures of the business done through this port for the past month show an increase in all lines. Duty collected in 1904 was \$140,431.86, while last July it was \$129,314.51. Exports increased from \$107,000 to \$121,000, and foreign exports from \$4,000 to \$13,000. The bank clearings also show a gradual expansion of trade, the increase this year being quite marked over that of last, which itself was greater than in the preceding year. Exports from New Westminster port amounted to over a third of a million dollars, \$350,123.

• • •

The Canadian Pacific liners are not following the example of the boats of the southern lines in refusing freight from this coast to Japan, Korea, Siberia, Manchuria, and China. Nearly all the steamers from Portland and San Francisco have issued the order that they will not accept the risk of taking goods to these countries as long as the war is on, but the Canadian Pacific confines itself to merchandise that is not contraband, and takes all that is offering. Large amounts of freight go from this port, consigned through to ports in all the countries named, even Vladivostok. There is no contraband being imported from Canada, and if any goes from America it is from some of the ports further down the Pacific Coast.

• • •

Logging camps are steadily closing up, the latest being McIntyre's at Topaz harbor. There is a continued dullness in the logging market, and unless the order-in-council prohibiting export is annulled, there will be no change. The representatives of the independent loggers saw the premier the other day, but were told to wait until there was a full meeting of the executive. It is not thought likely they will get their demand.

It has been pointed out that the issuance of 124 timber licenses during the past month is not indicative of as much activity as the figures would lead one to believe. Of this number 97 were for the interior of the province, where timber is in great demand just now, and where the industry is on a different basis than on the coast. Here only one was a new license, the others being renewals by men who do not wish to drop investments they have made.

Theodore Ludgate has been successful in his appeal to the Full Court regarding the ownership of Deadman's Island in Vancouver harbor. Five years ago he wanted to erect a large mill here, but the dispute arose that the ownership was vested in the province and not the Dominion, from which Government the lease had been obtained. The Full Court decided last week in favor of the latter, but an appeal will be made by the attorney-general to Ottawa. If he is further successful, Mr. Ludgate has stated his intention of building the mill.

• • •

Towns and cities in British Columbia are about to be supplied with coal from the mines of the Canadian Pacific Co. at Banff. This article is anthracite, and is said to be equal to the Pennsyl-

vania product. Heretofore the price of anthracite coal in Vancouver has been \$17, but the new coal will be \$10.50. It seems rather peculiar, particularly to the people in the east, that with coal mines at Nanaimo, and easy water transportation to Vancouver, bituminous coal should be the big price of \$6.50 per ton. Even now it is stated that this is to be increased, as Duns-muir and the Western Fuel Co., of San Francisco, also operating at Nanaimo, have combined interests.

\* \* \*

The largest shear legs on the coast have been erected at the Victoria Machinery Depot. They are 100 feet in length, and capable of lifting a weight of 75 tons. They are designed for hoisting or lowering boilers and heavy machinery, and dispense with the use of cranes.

## LONDON METAL MARKETS.

From The Metal Market Report, August 10, 1904.

**Pig Iron**—Scotch warrants Glasgow, closed at 52s., being an advance of 3d. since last issue. Middleboro No. 3 foundry closed at 43s 6d., an advance of 71-2d since last week.

**Tin**—Spot tin opened easy at £121 5s; futures. £121 17s. 6d., and after sales of 70 tons of spot and 120 tons of futures closed firm at £121 15s for spot and £122 7s. 6d. for futures, making price as compared with last issue £1 10s. lower for spot and 12s. 6d. lower for futures.

**Copper**—Spot copper opened quiet at £56 10s.; futures £56 11s. 3d., and after sales of 50 tons of spot and 150 tons of futures, closed steady at £56 10s. for spot and £56 11s. 6d. for futures, making price as compared with last week 10s. lower for spot and 7s. 6d. lower for futures.

**Lead**—The market closed at £11 16s. 3d., making prices as compared with last week 2s. 6d. higher.

**Spelter**—The market closed at £22 2s. 6d., making price as compared with last week 5s. lower.

## A PROGRESSIVE STOVE COMPANY.

**S**TILL more buildings are being added to the plant of the D. Moore Co., Hamilton. They are putting in an up-to-date large cupola to provide for their new shops recently erected, also new fan, which is to be driven by dynamo supplied by power from the Hamilton Cataract Power Co. They report their prospects for business were never greater, as "Treasure" stoves and ranges are so favorably known and up-to-date that their increased plant is already taxed to its utmost capacity to supply the growing demand for the large line of goods made by this firm.





**You Can Sell It.**

**Hamilton Rifle, No. 19,**  
retails for \$2.50.

Fine blue-black gun-finish. "Take-Down" stock of handsome Walnut. Fitted with rear peep sight with adjustment both ways. Distance between sights, 19½ inches. Lever action with Automatic Shell Extractor. Length over all, 32½ inches. Weight, 2 lbs. Chambered for .22 Cal. Short or Long R.F. Cartridges of all kinds.

A serviceable article for squirrels, rabbits, birds, frogs, target practice, etc.  
Send for circular and price list.

**The HAMILTON RIFLE CO.,**  
Box No. 71. PLYMOUTH, MICH.

C.H. HENKELS PHILA.

# STANLEY RULE & LEVEL CO.,

NEW BRITAIN, CONN., U.S.A.

**IMPROVED CARPENTERS'  
TOOLS**

**SOLD BY ALL HARDWARE  
DEALERS.**

## ALEXANDER GIBB

Manufacturers' Agent and Metal Broker,  
13 St. John Street, Montreal

Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

### PERSONAL MENTION.

Mr. J. W. Richardson, of Caverhill, Learmont & Co., Montreal, is holidaying at Knowlton, Que.

Mr. W. Campbell, of A. C. Leslie & Co., Montreal, has just returned from a two weeks' business trip.

Mr. Gordon Seybold, of The Seybold & Sons Co., Montreal, is at present seriously ill with pneumonia. His many friends hope for his speedy recovery.

Captain Strange, of Lewis Bros. & Co., Montreal, has returned to his desk from a visit to St. Louis.

Mr. Benj. Rogers, Jr., of The Rogers Hardware Co., Charlottetown, P.E.I., was in Montreal last week.

Mr. Geo. D. Wood, of the Geo. D. Wood & Co., wholesale hardware firm at Winnipeg, is at present on his way to England, and will likely be away a number of weeks.

Messrs. Jas. G. Crump, James Farquhar, and Geo. Kinsman, of Halifax, were in Montreal last week on their return journey from the St. Louis Fair, and, needless to say, they spent an enjoyable holiday and did not forget to visit the "Pike."

## The G. Weeton Mfg. Co.

MANUFACTURERS OF

**Fine Silver Plated Ware  
and Metal Goods.**

**We are Canadian  
selling agents for  
this maker's goods,  
also for L. A. Little-  
field of New Bedford,  
Mass.**

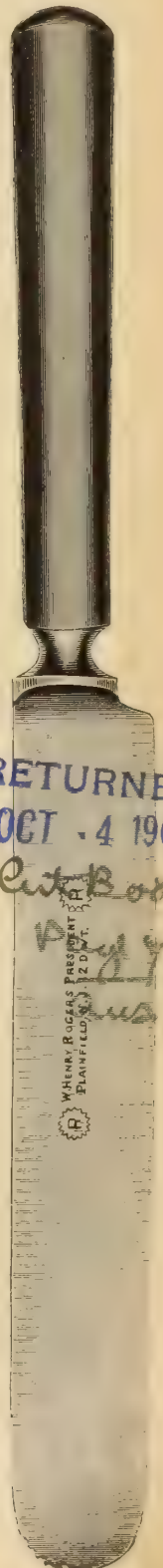
**Write for  
catalogues.**

Write for prices of this knife, also Jumbo Forks to match, put up half a dozen in a box with guarantee, also in sets of half a doz. knives and forks.

**Office and Factory :**

**117 Bay St.  
TORONTO.**

**Telephone—  
Main  
5135.**





## Silverware that sells



## Have you a Silverware Department?

\$50.00 will make a good beginning.  
100.00 is better still.

- No equal sum invested in any other department pays better returns.
- Silverware sells the whole year round. Some seasons are exceptionally good.
- Silverware sales are extra sales. They do not take away from the sales of any other department.
- But sell an unqualifiedly good grade of Silverware; and in order to compete with other sellers, sell Silverware of the newest and best design.
- STANDARD SILVERWARE, better than any other made, no matter where, is the kind to buy. It has earned for itself the saying, namely,

*"Silverware that sells."*

- Send for our large and handsome Catalogue, study it, make a selection, and send us your order.

**STANDARD SILVER CO.**  
LIMITED  
Hayter St., TORONTO

If  
You  
Want

Hammocks,  
Tennis, Cricket,  
Lacrosse or  
Hockey Nets,  
Manila, Sisal, or  
Cotton Rope,

Mason Lines,  
Chalk Lines,  
Clothes Lines,  
Sash Cord,  
Candle Wick.

Cotton Waste or Oakum

GET OUR PRICES.

We're quoting a special price on Plumbers' Oakum just now, also on Lath Yarn.  
**DON'T MISS THESE.**

**Hoffman-Corr Mfg. Co.**

"The Hammock People"

118 Bay St., - Toronto, Canada.

**WE'RE PROUD**  
of the immense success attained by

**REX Flintkote Roofing**

and you will be as well pleased if you investigate its good qualities. Waterproof, fire-resisting, and not affected by the vapors of acids or alkalies, it should be used on any building where a permanent roof is required. Any one can lay it, each roll containing nails, caps and cement sufficient for laying. Our free samples and illustrated book will be sent on receipt of your name.

**J. A. & W. BIRD & CO.,**  
49 INDIA ST., BOSTON, MASS.

**"LOOK FOR THE BOY" EVERY ROLL**

## To Manufacturers' Agents:

HARDWARE AND METAL has enquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of enquirers in our various offices throughout Canada and in Great Britain without charge.

Address

Business Manager

**HARDWARE AND METAL**  
Montreal and Toronto



# The Dominion Exhibition at Winnipeg

July 25 to August 6, 1904

*"In my opinion, this is the psychological moment for the holding of the Dominion of Canada Exhibition at Winnipeg."*

IN the above sentence Hon. Clifford Sifton, Minister of the Interior, expressed, in his address at the opening of the Dominion Exhibition, the view of the most progressive element of the west. Those intimate with the history of Winnipeg and the wheat lands of the west recognize that the past six or seven years have marked an epoch in the history of the country; that in those years a point of advancement had been reached that was worthy of more than even national attention.

For 150 years Manitoba and the Canadian Northwest have attracted the attention of the hardy pioneer. At first the land was exploited as a fur country, and its fame as such is still expressed in the prosperity of the Hudson Bay Co., who eventually secured control of that trade. Later, the hardy settlers found the soil fertile and the climate suitable for farming. The most farsighted of these predicted, more than a generation ago, that the Canadian west would some day be famous for its wheat areas.

Opinion regarding the possibilities of the west differed so radically in early years that it was only the great political sagacity and the determined conviction of Sir John Macdonald, Lord Strathcona, and a few others, that made possible the construction of the C. P. R.

## A Vital Step

The completion of the C. P. R. marked a vital step of progress in the Canadian west. The consequent inrush of immigration, the boom in Winnipeg, and later the depression following, are all part of that era of development.

It is recognized that the past six or seven years have constituted another epoch, an era of expansion surpassing in magnitude any previous records.

Good crops and good advertising (for the west as a farming country has been advertised in the United States and Europe with a persistence and discretion that would be a credit to any advertising expert) have made a combination which has resulted in an influx of population and a remarkable increase in the area of wheat lands under cultivation. A reflex result has been an expansion in Winnipeg which, though par-

taking of all the characteristics of a boom, is looked upon by conservative business men as not merely legitimate but inevitable.

## Time Ripe for Exhibition.

Realizing the extent of this forward movement and the impression it could not fail to leave on visitors, it was recognized by many that the time was ripe for an exhibition in Winnipeg which should be national in scope, and which would attract visitors from Great Britain as well as from the United States and eastern Canada. Not only would the best class of settlers be thus influenced, but the exhibition would serve to knit more closely together the bonds that unite the east with the west.

The people of Manitoba and the Northwest are as patriotic in their business relations as are those in any portion of the Dominion. They would appreciate, as would the manufacturers of the east, any factor which would furnish opportunity for the manufacturers to demonstrate to them the excellence of their wares. It was deemed that if the manufacturers came into close touch with, and studied closely the needs of, the western trade, that the result would be to extend the demand in the Canadian west for Canadian goods, and thus make the great expansion of the west of direct benefit to eastern Canada as well as to the west.

Many, however, have maintained that the time is not yet come for a Dominion Exhibition at Winnipeg. A year from now, they argued, would be soon enough. But it may be fairly said to be characteristic of western methods that if the time is not ripe for any development they force it, just as a gardener would force to fruition a backward plant.

## Obstacles Surmounted.

Unquestionably the obstacles that have been surmounted have been so exceptional that only men of strong conviction would have attempted the task. In the first place the buildings were poorly placed and woefully inadequate; they were remodelled and greatly enlarged. The hotel accommodation for exhibition visitors was almost a negligible quantity; an

accommodation bureau was established, and although tents and unfinished houses had to be called into service, all visitors were placed.

True, when the exhibitors arrived the cartage and power facilities were far from satisfactory; the buildings were not completed; the details of management neither complete nor fully understood. Yet, despite the difficulties met at every turn by exhibitors and management, and despite the fact that the number of visitors at the industrial displays was not up to the expectation of many exhibitors, the Dominion Exhibition at Winnipeg in 1904 will be looked back to as one of the mile-stones which are marking the rapid progress of the west.

The exhibition was national in every respect. From British Columbia were exhibits of fruit and timber that would have been a credit at a world's fair. From Ontario, Quebec and the Maritime Provinces came a group of manufacturers—of practically every class of goods—who had learned of the great market opening up and wanting to win the attention and patronage of the western buyer.

An indication of the extent of the lines shown is given in the following descriptions and illustrations of the various displays:

## The People's Gas Supply Co., Ottawa.

The People's Gas Supply Co., of Ottawa, whose display was near the door of the second industrial building, are promoters of acetylene gas machines and all accessories relating to acetylene. The exhibit at the fair this year consisted of a No. 3 Perfection Gas Machine, scheduled to run 25 lights for 10 hours, and holding 25 pounds of carbide; also a modern stereopticon acetylene gas, outfit, gas stoves, and working models of gas machines. Acetylene gas machines of the latest type are so constructed as to make it almost impossible for any one looking after them to cause an accident by reason of carelessness, forgetfulness or incompetency. They are so arranged that the neglect to close or open a machine or to put on any cap when cleaning or refilling cannot possibly allow gas to get out in the room. This reduces the possibility of an accident to a minimum.





Exhibit of People's Gas Supply Depot.

The usefulness of this gas for cooking and heating were practically demonstrated by a double burner hot-plate in operation.

Those interested in stereopticon pictures were attracted by the small, compact, portable generator, which could be conveniently packed in a galvanized iron case, and having a supply of carbide sufficient to run the outfit for several months if desired. This outfit weighs about 25 pounds and is only about a foot square. This generator is now used by the Dominion Department of Agriculture by their instructors who demonstrate by illustrated lectures the wisdom of intelligent farming. All the machines were automatic, and in full operation, lighting the booth, heating, etc. H. H. Pitts, general manager and inspector for the company, was present during the fair to explain the advantages of acetylene for isolated lighting to the interested public. Catalogues can be had on addressing a postal to the People's Gas Supply Co., Ottawa.

#### The Dowswell Mfg. Co.

The next exhibit was one which attracted much attention from the ladies. Here the Dowswell Mfg. Co., Hamilton, had a display of wringers, washers and churns which the Western housewives took great interest in. Twenty-three different styles of wringers are made by this firm, guaranteed from one to five years, according to grade.

A special line was the "bicycle" wringer, with steel ball bearings; extra high grade rolls; warranted three years; protected cogs; sure grip swinging

clamps for galvanized iron, wood or fibre tubs). In washers the firm's "New Century" is their favorite, fourteen different styles being made. In barrel churns Dowswell's "New Leader" comprises a new principle for this season. In addition to the hand drive an exceedingly easy running foot drive, which was patented May 24, this year, has been attached. There is, in this churn, no obstruction to placing pail for drawing off butter milk; the power is applied from the side and the operator has perfect control, the barrel is made to re-



The Dowswell Mfg. Co.'s Exhibit.

volve with greater ease by the use of a spring under the foot-tread. The churn has a strong steel frame and, having ball bearings, is an easy runner. In all the literature issued to intending buyers this company put the suggestion, "Ask your hardware dealer for this line," thus helping the retailer to make

#### The Metallic Roofing Co.

In a central position in the middle industrial building the Metallic Roofing Co., Toronto (Thos. Black, Winnipeg agent) had four panels of wall designs and two panels of zinc and copper ornaments, these making a wall 12 feet high and 36 feet in length. In front of this wall was a platform extending 18 feet, on which was shown panels of ceiling designs and other lines of their manufacture. Their famous "Eastlake" shingle was shown as applied in actual work, as were also their "Spanish" tile, "Diamond" tile, "Gothic" tile and "Empire" shingles. The harmony and beauty of the display can be readily realized by the trade from the view herewith shown. G. A. Gordon, sales manager of the Metallic Roofing Co., was one of the few representatives who had their display ready before the exhibition opened, the firm's system for expeditious handling of contracts helping him greatly to that end though his stock was received two days before the exhibition opened. Mr. Gordon reports many enquiries and, on the whole, sat-



# Sunshine Furnace

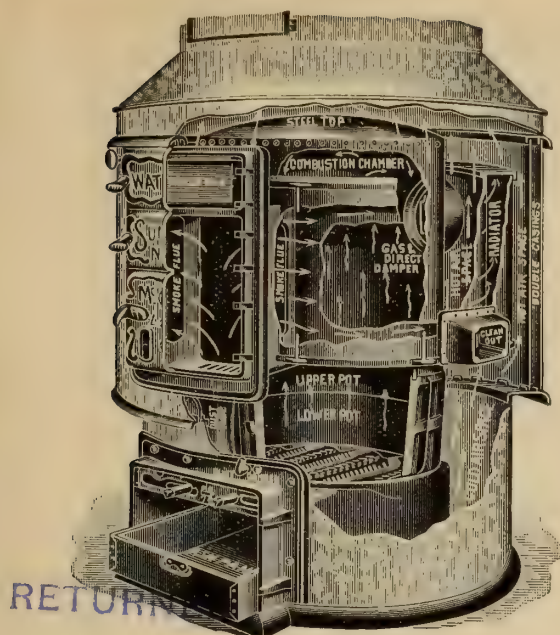
*Made in five sizes and two styles.  
Burns Coal, Coke or Wood.*

The "Sunshine" still holds its place as the best hot-air furnace in Canada.

Testimonials from well-pleased users of the "Sunshine" Furnace are coming in every day.

Our advertising is still running in the papers and helping our customers to sell "Sunshines."

Are you among the lucky ones who are taking advantage of all this publicity? If not, you should arrange to be.



# Kootenay Steel Range

*4 or 6 Cooking Holes.  
Burns Coal, Coke or Wood.*

The "Kootenay" is built on the same lines as our most expensive steel range, the "Cornwall," the only difference being that it is lighter.

The material and workmanship are the same and the finish is such that it is difficult to detect the difference between the "Kootenay" and ranges of much greater cost.

The "Kootenay" is as good value for the money as any range made and better than most.

Write for advertising matter. It's free.



## The McClary Manufacturing Co.

London, Toronto, Montreal, Winnipeg, Vancouver, St John, N.B.

**"Everything for the Tinshop."**



isfactory results from the exhibit. One result which was particularly gratifying was the opinion, expressed by architects who examined the display in detail, to the effect that the embosing in the metal work shown was much superior in both design and finish to what they had thought possible.

### The Winnipeg Rubber Co.

One of the most popular exhibits in any of the three industrial buildings was that of the Winnipeg Rubber Co., Winnipeg, the western representatives of the Gutta Percha & Rubber Mfg. Co., Toronto.

In the exhibit were two large plate glass cases, fitted with inside electric lights and containing in the one a display of fire hose from 2½ inches to the large 5-inch hose used in the big fire boats. In the rear of the cases was exhibited a full line of all kinds of rubber novelties. A working model of the Seagrave ladder was also upon exhibition and received plenty of attention from visitors. A specialty was made of the celebrated "Eureka," "Paragon" and "Red Cross" cotton rubber-lined fire hose, as well as the widely known "Maltese Cross" carbolized fire hose.

Large quantities of the above goods have been in active service in different fire departments all over the Dominion for the past fifteen or twenty years. A full line of fire department supplies, such as play-pipes, nozzles, etc., were upon display.

This company also handle very large quantities of rubber belting, such as the



Exhibit of Metallic Roofing Co.

"Monarch," "Red Strip" and "Lion" brands, and supply a big proportion of the belting used in the elevators throughout Manitoba and the Northwest. Recently they received a contract for the belting in the new Canadian Northern elevator at Port Arthur, awarded against all American and Canadian firms.

In hose they handle all sizes from the one-half inch garden hose to the largest for railway and mining purposes. The company are the exclusive manufacturers

of "Redstone" and "Bluestone" high pressure steam packing, and also handle different styles of packing for all purposes.

The whole floor space is covered with "Maltese Cross" patent interlocking rubber tiling. It is sanitary, noiseless and practically indestructible, which make it especially adapted for public buildings, libraries and steamboat flooring. They also keep a very large and varied assortment of rubber mats and matting for hotels and other public places. The Winnipeg Rubber Co. are the only firm in the west having the exclusive selling rights for the Springfield tire and Fisk detachable motor tire. Both of these tires have been adopted by large manufacturers in the United States and Canada. W. G. Fowler, assistant manager of the company, had the exhibit in charge, and made such an excellent showing that the company were awarded the Dominion Exhibition gold medal, the highest award ever received for a rubber goods display in Canada.

### The Enterprise Foundry Co.

Another exhibit which was practically new to the western trade was that of the Enterprise Foundry Co., Sackville, N. B., under the care of W. S. Fisher, of St. John. This firm have been doing business in the Maritime Provinces for sixteen years, and during the past three years have extended their operations to include Quebec and eastern Ontario. Their connection in the west has been limited to a few carloads sent out last year. These, however, met such a favorable reception that the firm have



The Winnipeg Rubber Co.'s Exhibit.



RETURNE

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Enterprise Foundry Co.'s Exhibit.

recognized the opportunity of getting a permanent grip on the western trade, and their exhibit was a strong big in that direction. They have waited until they had a full line which was in every way suitable for the west, and now they are ready for any business from that quarter.

Their leading line is a steel range, the "Enterprise Monarch," a modern, high-grade stove in two sizes, some of the strong features of which are a large feed and a large fire-box, suitable for wood or coal; a deep, large ash pit; a detachable (in a moment) 10½ gallon tank, and a chain attachment by which the entire front can be lifted for boiling. The "Sterling," also shown, is a cast range made in two sizes for coal or wood, with or without large copper reservoir and fitted with nickel rails, which can be detached when black-leading the stove. In the "Sparkle Oak" was shown a line of inexpensive round heaters for coal or wood, with adjustable rails. Several "Enterprise" hot blasts were also shown, the main features being their lining of heavy fire-brick right to the top. Two samples of "Monarch" grates, one in oxidized copper, the other in brass, formed the central foreground of the display. Any of the trade desiring further particulars can secure this firm's advertising literature on application.

#### The Penberthy Injector Co., Limited.

The value of practical demonstration was proven by the success of the Penberthy Injector Company's display, the chief feature of which was the operation of a lathe by one of the firm's mechanical experts, who was engaged in the manufacture of injectors from the castings. At almost any hour of the day crowds of visitors, chiefly men,

could be seen watching the work, which carried on the injector from the casting through six operations until the body was completed. Apart altogether from this the exhibit was a decidedly attractive one, especially to the trade. The railing or fence of the display was composed of injectors, with a few oil cups to add symmetry. In the background one stand and a long shelf was devoted to the Penberthy injectors ranging from 3-8 inch to 2 inches; one stand to water gauges, gauge cocks and air cocks; another stand to glass oilers, a full line being shown; a fourth stand to grease cups; the fifth to ejectors. All of these goods are too well known to the trade to need detailed description here, with

the possible exception of their "Penberthy" force feed lubricator, which has high-grade, interchangeable ratchet, which practically doubles its life. This lubricator is made in one, two and three pint sizes. Other new lines are their "Simco" and "Salute" glass oilers for stationery bearings and their "Sultan" oiler for gas engine cylinders. The souvenir given by the Penberthy Company was one far beyond the usual in real value and in attractiveness. It was a tobacco pouch, made of thick, heavy leather in tasty colors. A dainty design in burned work and colors and a nickel ring, making it a pouch that anyone might be proud to carry. Needless to say, the demand for these pouches was remarkable. They were, however, only given to engineers who use, and to members of the trade who sell, these injectors. E. B. Kelly, manager of the sales department of the Penberthy Injector Co., at Windsor, was in charge of the display and to his energy and resource much of the success of the exhibit must be credited.

#### The Record Foundry and Machine Co.

An exhibit which was new to the western trade was that of the Record Foundry & Machine Co., Moncton, N.B., Montreal, and Toronto. This firm have, for more than a generation, been solidly entrenched in eastern Canada, and last year, by the erection of large works in Montreal, to supply the western trade, they are now in a position



Exhibit of Penberthy Injector Co., Limited.



to ask their share of business in Manitoba, the Territories and British Columbia. The chief lines made by this firm are the Highland Grand, the Penn Esther, and the Record Grand. Many of the trade will remember the latter two lines as the Canadian stoves which, in competition against the world, secured a medal of merit at the Paris Exposition in 1900. Each of these three lines are made in thirteen styles, in the three standard sizes. Two styles of the Highland Grand, one in nickel finish, the other in iron with nickel ornaments, were displayed; also five styles of the Penn Esther, and four of the Record Grand. These, together with wood, coal and combination furnaces, air tight, Oaks and base burners, also several specialties in ordinary cookers and box stoves, comprised an exhibit which caught the fancy of many western householders, as well as of the trade, for the reason that these ranges, though new to the west, have reached a point of quality, in both style and serviceableness, that ensures for their makers a growing share of the trade in Manitoba and the Territories in the future, as they have in the past obtained in the east. Any hardwaremen who are not acquainted with this line are requested to write for catalogues and other literature to any of the branches of the company.

#### The James Smart Mfg. Co.

At the western end of the central Industrial Building the display of the James Smart Mfg. Co. was a centre of attraction. A superb display of edge tools, artistically arranged on a high



Exhibit of Record Foundry and Machine Co.

stand. In front of this was an "Excelsior" refrigerator, one of the firm's product. The chief feature of the display, however, was the "Kelsey" warm air generators shown. The first was cased for installation, the second showing the furnace ready for casing; the third and fourth were arranged to show the sectional fire pots, the feature that has made the "Kelsey" generator such a popular heating appliance throughout Canada. At the extreme west was a sample of the new soft coal "Kelsey"

which the firm have completed for this season's trade, a detailed description of which was printed in Hardware and Metal three weeks ago. This generator will use to best advantage, and with small need of cleaning, any of the soft coal of Western Canada. One of the "Imperialist" furnaces, the chief line made by this company, was also included in the exhibit as were also a large variety of side-wall and floor registers and a number of lawn mowers. A model "Kelsey" generator, about a foot high, was used to excellent advantage by Malcolm Campbell, general agent for Western Canada, in demonstrating the enquiries the advantages of this heating system.

#### The Gurney Foundry Co.

At the extreme west end the Gurney Foundry Co., Toronto, Winnipeg and Vancouver, had a display which covered practically every phase of heating and which won general attention for its beauty as well as its diversity. At the north of the exhibit was a handsomely decorated row of "Oxford" radiators, several styles being shown. Near these were a row of six "Oxford" boilers in pure white, beside which were a row of "Defiance," "Gothic," and "Jacket" boilers in the same color. Beside these was a row of "Jumbo" and "Little O" wood furnaces. A number of the large "Oxford" coal furnaces were beside these, while further to the south was a steam-heated caulking table, a "John

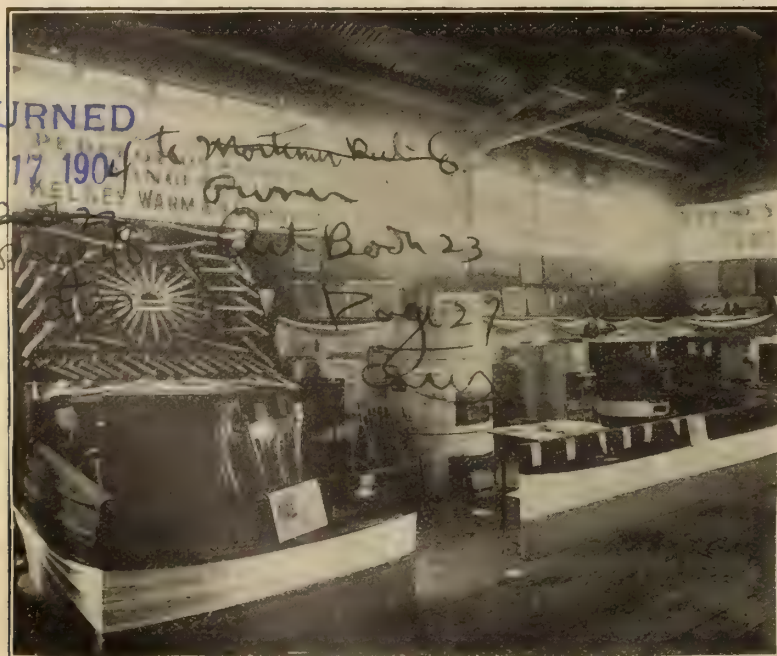


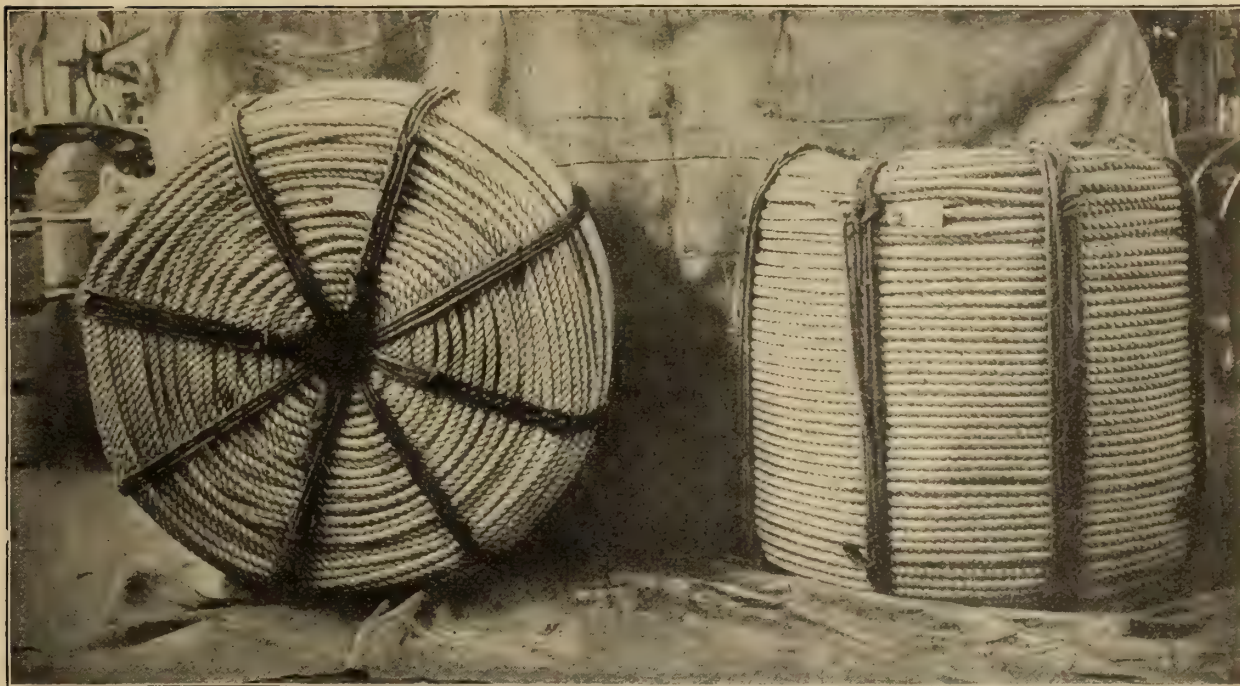
Exhibit of James Smart Mfg. Co., Limited.



# CANADIAN CORDAGE & MFG. Co., Limited.

## Manila Rope

of all kinds, from the largest to the smallest.



The **LONGEST COILS** of 7-8 in. diam. and 1 in. dia. **HAY FORK ROPE** ever made.

The coil of 7-8 in. dia. measures 8,680 feet long and weighs 2,170 pounds. The coil of 1 in. dia. measures 8,166 feet long and weighs 2,450 pounds.

We manufacture also in Manila Cordage; Oil Well Cable; Sand Lines; Hawsers, tarred and untarred; Transmission Rope; Plumbago Laid Hoisting Rope of the Highest Quality.

Can we serve you—A postcard will obtain the prices.

**CANADIAN CORDAGE & MFG. CO., Limited**  
Peterborough, Ont.





Gurney Foundry Co.'s Exhibit.

Bull" heavy duty hotel range with wood barrel and stand and a "John Bull" army range with high closet and canopy top and a 52 gallon range boiler. Facing the south was an "Imperial Oxford" range, the standard of merit in stove building, three "Chancellor" ranges, three "Laurel" base burners. Above all the display was a handsome canopy of red, white and blue, surmounted by a big rosette. Hundreds of enquiries were received by the Gurney Company, especial interest being taken in their hot water appliances and their hotel ranges. The Gurney Foundry Company's goods are already favorably known throughout the West, but they are taking every means to help their agents in interesting householders in "Oxford" goods.

#### The Amherst Foundry Co.

From Amherst a display of enamelled ware and general heating goods were shown by the Amherst Foundry Co. The display of enamelled cast-iron bath tubs, sinks, lavatories, etc., was particularly interesting, as the firm are the second in Canada to successfully make this line, and although they have only been making it for the last three months the goods have an appearance that compares to advantage with the best imported. In a display of seven hot air furnaces, four for wood, two for coal and one combination, this firm showed the furnace which this company have made so popular throughout Nova Scotia, they having a hold there that no competition seems to weaken. The first line of steel ranges to be made in

eastern Canada, known as the Home Circle, also attracted much attention, while the Home Jewel hot blast, and the Oak Laurel and Gold Coin Oak brought many inquiries from visitors desiring small heaters. Mr. Black, president of the company, states that they intend to establish a western connection. They have a proposition which they believe will interest the trade in the west, so invite inquiries from the retail trade.

#### Merrick, Anderson & Co.

In the exhibit of Merrick, Anderson & Co., a range which attracted much attention was the "Grand Jewel" wood cook, with one piece, rolled cold steel oven, made in four sizes. Another favorite was the "Crown Jewel" steel

range, with its swinging key plate, a feature distinctive with this line of range. In it either coal or wood can be used as it has an interchangeable fire-box for wood with extension pocket, allowing use of fuel 26 inches long. Sectional fire backs, removable bottom and dump grates are also features of the "Grand Jewel," while the the body is finished in planished steel. The "Farmer's Jewel" wood furnace also proved popular. This heating apparatus is especially adapted for farmers who use wood as fuel, and is particularly good for cellars with low elevations or rocky grounds where excavations would be costly to get a high furnace installed, the height of this one being only 3 feet 6 inches, while the width over all is 2 feet 3 inches, and the length 3 feet 8 inches with 8-inch smoke pipe. Provision is made for five warm air pipes, having a total capacity of 362 square inches. Cold air is introduced through openings in the side plates, at the bottom of the casing, equal to a total area of 250 square inches. This furnace is capable of heating a house with 15,000 cubic feet of heating area, as a specially large feed door admits large pieces of rough wood of 13x15 inches up to 36 inches long. The "Jewel Triple Heater," a most substantial, economical heater, has three warm air collars to which three tin pipes can be attached for heating upstairs, the main body of the stove heating downstairs. These hot-air spaces are fed by cold air ducts at the bottom of the heater. The fire travels 7 feet 6 inches before reaching the smoke pipe, the result being that all



Exhibits of Amherst Foundry Co. and Maritime Heating Co.





# "SICHE" FOR LIGHT FOR HEAT HAS NO EQUAL

In world-wide use. Made in Canada:

|    |   |          |   |                     |   |               |
|----|---|----------|---|---------------------|---|---------------|
| at | { | Toronto  | - | THE SICHE GAS CO.   | - | 81 York St.   |
|    |   | Winnipeg | - | THE SICHE GAS CO.   | - | 483½ Main St. |
|    |   | Montreal | - | THE SICHE LIGHT CO. | - | 782 Craig St. |

LIMITED

We are the Largest Manufacturers of

## GAS APPARATUS

under the British Flag.

WE CARRY EVERYTHING

WRITE FOR CATALOG AND PRICES.

(A FEW GOOD AGENTS WANTED.)



the heating power is retained within the steel casing for distribution, which means a big saving of fuel. Among the other lines are "Moore's" air-tight heaters, with cast tops, made in four sizes; the "Stratheona" hot blast is a splendid line in six sizes for farmers. In it soft, hard or lignite coal, wood, coke or cobs can be used. With its peculiar system of down draft it ignites and consumes its own gas, thereby causing a distinct saving of fuel. The "Riverside Oak," made in four sizes for coal or wood, is of beautiful design, with swing cover and double heater attachment. During the two weeks of the Exhibition, Merriek, Anderson & Co. had two heating experts at their exhibit explaining the features of the various heating apparatus to farmers and other householders.

#### H. Mueller Mfg. Co.

The H. Mueller Mfg. Co., Decatur, Ill., manufacturers of plumbers' supplies, gas works and water works specialties, etc., had during the last days of the exhibition a display which attracted wide attention. In the foreground were shown their water tapping machines, which they guarantee to tap a main, thread it and insert a corporation cock without losing a spoonful of water. This machine is in general use in both the



Exhibit of W. J. Copp, Son & Co.

United States and Canada and was the object of much interest to any mechanical visitors. On a stand back of these machines were an assortment of plumbers' and waterworks supplies. The display of the firm, though an excellent one, was not up to their expectations, as all of their goods were delayed in transit, only enough arriving to show the trade the indisputable merit of their line. One

of the most splendid exhibits at the St. Louis Fair is that of the Mueller Mfg. Co., who invite all Canadian plumbers or corporation engineers to examine that display or to write to them for catalogues and prices, mentioning Hardware and Metal when writing. W. C. Heinrichs, northern representative of the company, had this exhibit in charge and in the few days he had to display his goods he accomplished excellent results.

#### W. J. Copp, Son & Co.

The western dealer will appreciate the efforts of one manufacturer in locating his factory with a view to exclusive trade in the western provinces of the Dominion. W. J. Copp some two years ago decided to locate a stove foundry at the gate to Manitoba and the Northwest, Fort William, and, in company with his son, has built a modern stove plant there which has been busily manufacturing stoves, ranges and furnaces for nearly a year.

The firm's display was certainly a great credit to them. The character of the goods shown readily appealed to the western dealer and consumer, as at a glance their adaptability for the western requirements was manifest.

The Copps have been known to the stove trade for over half a century. Bringing their many years of experience to bear on the needs of this portion of our Dominion, they will, we believe, build up a large and successful business in their new western home at Fort William. The quality of their heating goods was easily understood when it was understood that special provision



Exhibit of H. Mueller Mfg. Co.





Exhibit of Munro's Spring Mattresses.

has been made in their new plant to turn out the best that could be produced.

Their steel range lines for general household use presented an attractive and complete assortment. The trade may be interested in learning they intend to make a specialty of steel goods, both in cookers and heaters. An unusually handsome line of hot blast air-tights, a class of heater now so popular in the west, was also shown.

The long and honorable history of the Copps, covering as above stated over fifty years, together with the quality of their goods and excellent situation of their plant, ensures a successful future for this company, particularly in their connection with the western trade, who have already manifested their interest in "Empire" stoves, ranges and furnaces.

#### The Western Foundry Co.

That youthful firm among the companies of Canada, the Western Foundry Co., Wingham, Ont., made a showing which reflected credit on the company and the representatives in charge, W. Bingham, of the firm of W. S. Brock, Western representative. Such an excellent showing of "Huron" heating goods was made that many visitors were interested in the display. The "Huron Chief" range received especial attention for its strength and beauty and its distinctive features. The demonstration that its drop oven doors, frames, trimmings and supports were non-breakable, being of malleable iron, polished and

nickelplated, proved effective talking points for this range, as were also the fact of its being a fuel economizer, having extra heavy, imported brick linings.

The largest size of this stove is excellently adapted for hotels, restaurants, steamships, railroads and all public and private institutions.

Another line of ranges displayed by this firm, the "Crown Huron," built for kitchen economy was a model which

aroused attention by its simplicity and utility.

The Western Foundry Co. also had in their display samples of their "Huron" steel range, the "New Ontario" stove, "Huron" air tights and hot blasts, "Huron Red Hot" furnaces and "Royal Huron" stoves, all of which are rapidly becoming known to Western householders as well as to the Western trade.

#### The Munro Wire Works.

The exhibit from the most distant point in Canada was that of the Munro Wire Works, New Glasgow, N.S. The chief feature of this display was the operation of a new patent bed-spring making machine, which drew the smooth steel wire in at one end and delivered it at the other ready for attaching in the bed spring. These operations were eagerly watched by hundreds of visitors. Only those who examined in detail the spring produced could thoroughly appreciate the importance of this invention. Instead of about 500 pieces of wire in the production of a bed this spring only entails the use of a few pieces which automatically fit together. In addition to the economy of manufacture thus made possible this invention makes possible the folding up and resting of bed spring which will cut in two the space used and in consequence the costs of



Exhibit of Western Foundry Co.



transportation, an especially important point in export trade or for long shipments.

Another invention of Mr. Munro, president of the company, who had charge of the exhibit, is a bed frame, stamped out of steel and made in the same shape as a steel girder but hollow, thus providing great strength at extremely light weight. The same principle is used by this firm in the manufacture of steel fence posts.

In addition to the valuable lines the Munro Wire Works offer the trade a full assortment of bank and office grills, wire of all kinds including screen doors, win-lows, etc. A line of especial interest to the hardware trade is portable steel fence with ornamental tops, the pickets being 1 1-2 inches wide and being held in place by strands of steel wire twisted and attached to each picket by a tongue stamped out of the steel. This fence is so nicely built that 100 feet can be made into a roll 2 feet in diameter. The Munro Wire Works desire to interest the Western trade at once and would appreciate any enquiries.

#### The National Cash Register.

One of the most interesting displays was that of the National Cash Register located about the centre of the north entrance aisle of the Winnipeg Building. All the machines were displayed on



Exhibit of Pease Foundry Co., Limited.

beautifully illuminated pedestals, square in shape. On each side of these were handsome pictures of the different departments in their enterprising manufacturing plant in Dayton, Ohio. Mr. C. J. Whipple, the company's Western manager, in his indefatigable demonstrations on the operating and the use of this time-saving machine, had con-

stantly a crowd of interested spectators listening and watching the explanations illustrated. The National Cash Register Co. besides their extensive factory at Dayton, Ohio, were obliged to erect a large factory at Toronto in order to cope with the demands of the Canadian trade.

#### Pease-Walden Co.

In the main corridor of the Central Industrial Building the display of heating apparatus by the Pease-Walden Co., Winnipeg, attracted much attention, especially from the trade.

In the background of the accompanying engraving will be seen the "Economy" school heater and ventilator, adapted for heating by warm air large buildings, such as schools, churches, etc., and suitable for burning soft coal or wood. At either side of this were several of the "Economy" round furnaces so favorably known to the trade. The success of these furnaces is due in large measure to superior construction of the grates and to heavy steel domes and radiators, allowing a free circulation of air, which becomes moderately heated while passing over a vast amount of radiating surface. The firm during the fortnight of the exhibition distributed a great deal of literature emphasizing the success attained by these furnaces in thousands of the best homes throughout the Dominion in which they have been installed.

The "Economy" combination hot water and warm air furnaces also attracted much attention. This system, while somewhat new to western Canada,



Exhibit of National Cash Registers.

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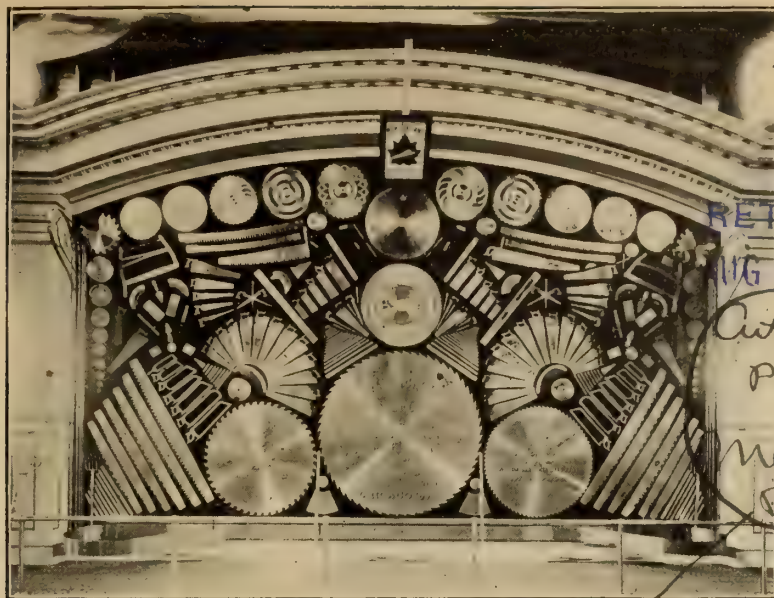


Exhibit of Shurly & Dietrich. *St Farming World.*  
*Cut Book 22*  
*Page 53*

seems likely to meet with the general approval of the western trade. Several large contracts have, since the exhibition opened, been awarded this company for this system of heating.

In the "Economy" wood furnace, with its large fire-box and well-constructed radiators, the Pease-Waldon Co. have a furnace in which they have already done considerable business. This heater is made chiefly for burning wood, but the parts are so constructed as to be a good soft coal heater.

The "Economy" hot water boiler, which shows to advantage in the engraving, needed only an examination of the depth of fire-pot and centre water ways and the general principle of construction to convince intending purchasers of its advantages.

The supply of circulars describing the "Florence" steam and hot water boiler, the Canadian patents of which were recently purchased by the Pease Foundry Co., of Toronto, were freely distributed to the trade. This exhibit, with its beautifully decorated radiators and the neatly panelled maple leaf emblems, set off by palms, etc., was one of the most attractive in the building.

#### Dundas Axe Works.

On a large stand in the middle industrial building, was a display of chopper's axes which visiting hardwaremen found of much interest. This exhibit, made by the Dundas Axe Works, Dundas, Ont., was comprised of the chief lines of high-grade axes made by this firm, particularly such brands as "Crown Jewel," "Flint Edge," "Valley City," "Challenge," "Valley City Champion," "Valley City Victor," and

case, decorated in white and gold and 36 feet long by 22 feet high. The background was a rich setting of black velvet and like a beautiful picture kept the passing multitude spellbound with admiration at this wonderful array of saws.

This firm manufacture in great quantities mill band saws which for even temper and quality are not excelled. Their Maple Leaf high grade hand saws have a wide reputation for temper, quality, beauty and finish. They are tempered under the firm's secret chemical process which toughens and refines the steel and will by this process hold a keener cutting edge longer than by any method formerly tried.

The firm also has a beautiful display of high grade harvest tools of descriptions of the finest finish and temper.

The firm of Shurly & Dietrich have for years been in the van as manufacturers of high grade saws, a proof of this that at the Chicago World's Fair, held in 1893, they were awarded all the highest honors for the best quality, finish and display of saws. The Maple Leaf brand of saws are the only ones exported in large quantities to the cities of the United States. They also export their brands of saws to Australia, New Zealand, the British Isles and Brazil.

#### International Stock Food Co.

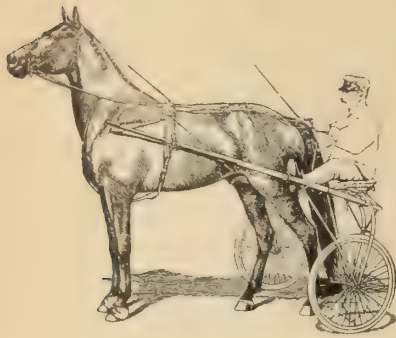
In one of the tents near the fruit, flowers and dairy building, the International Stock Food Co. had a display which caught the fancy of the farmers. During recent years stock food has be-



The International Stock Food Co.'s Exhibit.



# You make more Money



By selling **International Stock Food** than you do by selling any other advertised food on the market. Some other stock foods may seem to offer you a larger percentage of profit but you would need to pay a salesman \$100.00 per week to sell it.

## INTERNATIONAL STOCK FOOD

is practically sold for you before you stock it. It is the best advertised food on the market to day. The Company is capitalized at \$2,000,000.00 and can afford to advertise it so that every farmer

in the country will know about it. **International Stock Food** has had the enthusiastic support of dealers and users from Halifax to Vancouver. Some of the largest wholesale houses have lent the weight of their reputation to it—this after thoroughly satisfying themselves as to its superiority.

**Write at once for Catalogue and full information regarding the assistance we give our dealers. We pay GENEROUS PROFITS. Every hardware dealer should sell Stock Foods, for he is in constant touch with farmers.**

— ONE DEALER TO A TOWN HOW ABOUT YOUR TOWN.

## International Stock Food Co., Toronto, Canada

A large lithograph of **DAN PATCH**, champion harness horse of the world, free to any reader of this paper.

come a special in many stores and the International Stock Food Co. always take the retailer into account when dealing with the farmer. The purpose of the display at the exhibition was to demonstrate the value of the various lines to the visiting farmers, a method that assists the sale of the line in every retail branch. In addition to the stock goods and remedial preparations for stock which were shown an important feature of the exhibit was a model dipping trough, designed to show stock raisers a sure way of ridding cattle and sheep of mange or scab. The extensiveness of range and the merits of "International" foods and remedies are well known to Hardware readers and the exhibit at Winnipeg did much to extend the reputation of the line throughout the West. In addition to literature distributed the firm gave away "Dan Patch, 1561-4" buttons until the rapid demand had exhausted the supply. Any enquiries from dealers seeking agencies for stock food are requested to write to the Toronto or Winnipeg offices of the Company.

### The Moffat Stove Co.

The Moffat Stove Co., of Weston, Ont., were fortunate in the display space secured for their exhibit. It was at one end of the stove exhibit, so that any visitors could not help noticing it.

Here were shown the wide variety of steel and cast ranges, heaters and small cookers made by them. The most popular stove in the line of steel ranges was the "Canada," made with either a left or right reservoir, a new departure in



Exhibit of Moffat Stove Co.

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We make Electric Fixtures, Sockets and Cut-Outs.

# Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.

stove manufacture. This range is manufactured of cold-rolled Breton stretched steel and is a particularly good baker. Its oven is large, well ventilated and constructed so as to assimilate the most heat from the least fire possible. A recommendation for the "Canada" is its adaptability for any kind of fuel, having special linings and grates for hard or soft coal or wood. The linings are ventilated so that western soft coal can be used in this stove. Much study and

that caught the fancy of many visitors.

In the line of heaters this firm have added new improvements to the hot blast for burning western soft coal. It is made with a front door feed, giving a better opportunity for taking out clinkers and obviating the dust, which was the unsatisfactory point in the old style. Every stove is made as a single or double heater. R. W. Biggar, who was in charge of the exhibit, was on hand the two weeks explaining the many

erding a space of 130 feet by 11 feet.

The exhibit was most admirably displayed and gave the visitor some idea of the vast range of products made by this company.

Starting at the entrance of the building first appeared the waterworks supplies consisting of hydrants, valves, valve boxes, and special castings, then followed a line of the well known Northey

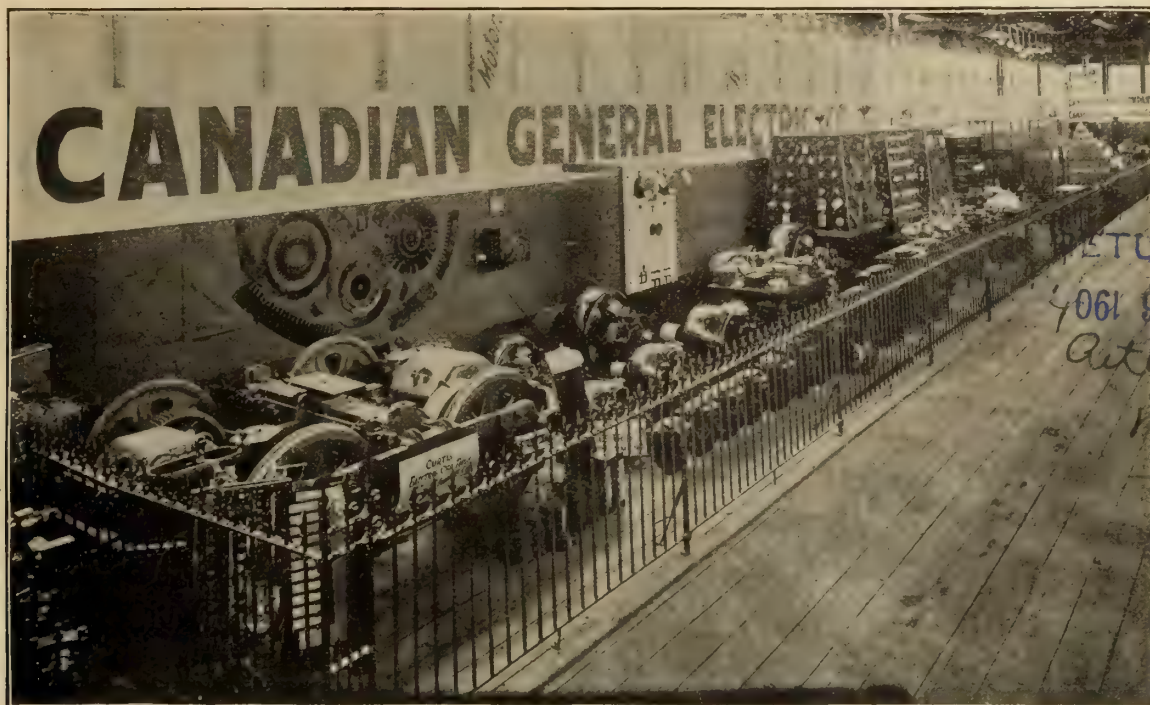


Exhibit of the Canadian General Electric Co.

experimenting has enabled the manufacturers to produce a range that will suit the customers of the west, as when soft coal can be utilized as in this stove it is the cheapest fuel obtainable there.

Another very popular article in the cast ranges was the "Classic," which is built in two sizes and makes a good reputation for itself. It is nickel finished and beautifully polished, thus being easy to keep clean, a consideration

points of advantage of the stoves and ranges in the display to householders and to the trade.

## The Canada Foundry Co. and Canadian General Electric Co.

The largest space in the Machinery Building was occupied by the Canadian General Electric Co., and Canada Foundry Co., of Toronto their exhibit consisting of four carloads of electrical

pumps, boiler feed, single and duplex, jet condensers, sinking pump, power triplex pumps and centrifical pumps followed by drinking fountains, hitching posts, lawn rollers and seats.

A large and imposing pyramid of set screws and nuts next caught the eye, of which the variety was a surprise to even those mechanics who are constantly using them.



The products of the Subway Works were shown by a superb teller's cage finished in matt copper with a counter railing of handsome design in a like finish, samples of electro plated finishes were shown in endless variety.

A very choice selection of wrought iron andirons, fenders and fire screens attracted much attention.

In the office were displayed views of the different factories and descriptive matter and information were dispensed to all interested.

The remainder of the space was devoted to the electric interests and here the attention of the wiremen was fixed as he looked with envious eyes, on the display of electric supplies in such a variety as had before been unknown to him.

The ladies' attention was arrested by a display of electric cooking and heating apparatus.

This was followed by a complete line of direct current motors from 2 horse-power to 35 horse-power, one being shown in operation driving a generator supplying current for the exhibit, among other thing to a number of meridian lamps which received universal admiration.

A full line of transformers was displayed together with the core and coils used in their manufacture, demonstrating the method of insulation used in the manufacture of the well known type H.

A handsome marble switchboard formed the background.

Next appeared a Curtis electric car truck equipped with C.G.E. 67 motors and standing nearby were two K10 controllers with the covers off, disclosing the mysterious working parts.

On the wall was arranged a neat display of armature and transformer punch-



Wire Fence Exhibits.

ings and armature coils insulated ready to be placed in the machines.

In an annex further down the aisle was shown an S.K.C. 150 K.W. generator and a "Tub" transformer for series arc lighting.

The whole forming a display calculated to impress one with the conviction that Canadians have in their midst a source of supply in electrical and mechanical engineering lines, equal to anything on the American continent.

#### A. R. Williams Machinery Co.

The A. R. Williams Machinery Co., of Winnipeg, had in the middle Industrial Building a full line of iron-working machinery tools, including lathes, drills, planers, grinders, etc., blacksmiths' ma-

chinery and supplies, including power trip hammer, forges, blowers, blacksmiths' drills, etc.; wood-working machinery, including planers, matchers, circular and rip saws, mortising, trimming and mitre machines, etc.; machinery supplies, including pulleys, shafting, hangers, collars, couplings, lifting hoists, with lift power up to 4,000 lbs.; full line of steam pumps, etc. The A. R. Williams Co., in addition to the above comprehensive list, had on display at their Winnipeg office, 45 Notre Dame avenue east, a general display which was visited by many machinists and blacksmiths during the exhibition.

#### Wire Fence Exhibits.

To those interested in wire fence this part of the exposition must have been very entertaining. Among the exhibitors in this section were the Owen Owen Sound Wire Fence Co., the London Fence Machine Co., Limited, the H. R. Lamb Fence Co., the Manitoba Frost Wire Fence Co., and the Canadian Steel and Wire Co., Limited, Hamilton, Ont.

The Canadian Steel & Wire Co., Limited, are manufacturers of the Ellwood fencing. There is the standard style of this fence for all general uses, besides which there are special styles for lawns, poultry reserves, etc. This firm also handle the American field and hog fence.

The London Fence Machine Co. manufacture and sell the London fence machine, coiled spring wire, and gates, etc. With the London machine the firm claim that the average farmer with



A. R. Williams' Machinery Exhibit.





Exhibit of The E. Long Mfg. Co.

pulley stretchers and reel can stretch and weave nearly as much fence per day as he could stretch from the roll, and make a better job of it.

The Manitoba Frost Wire Fence Co. are manufacturers of Frost Wedge-lock spring wire fence and coiled spring wire. This fence is made for ordinary use on farms, etc., and also in fancy ornamental patterns for special uses.

The H. R. Lamb Fence Co., London, Ont., with offices and warehouses in Winnipeg, manufacture the "Lamb" fences and gates. This fence is made in many styles for general farm use, for stock fence, for sheep fence, and for hog fence.

#### The E. Long Mfg. Co.

Every machinist visiting the exhibition found the display of the E. Long Mfg. Co., Orillia, Ont., of much interest. This firm make a specialty of saw milling machinery, and had present their "Clipper" shingle mill, which has a record of 60M shingles in 10 hours; the "Clipper" saw shingle jointer, three saw edgers, 40M per day; "Lockport" swing shingle machine. Their five-saw lath mill outfit; No. 1 saw frame, 15 to 20M per day; No. 00 saw frame, 5 to 10 M per day; No. 00 saw carriage, 5 to 10 M per day; No. 2 saw carriage, 10M per day; double-gear log haul-up; single-gear log haul-up; direct-acting steam feed. The Long company have an enviable reputation in Canadian saw milling centres, and all who examined the machinery shown and could appreciate the up-to-dateness of design and their strength and finish, could understand the basis upon which the reputation is founded.

#### The Waggoner Ladder Co.

Near the display of threshers the Waggoner Ladder Co. have on display a high pyramid of ladders, which attract-

ed the attention of many photographers. To the many inquirers this firm distributed literature drawing attention to their clothes reels, step ladders, portable scaffolds, lawn swings, ironing boards, curtain stretchers, and the large line of ladders manufactured by them. Needless to say, their display should help the hardware dealer in the sale of these lines.

#### The Winnipeg Paint and Glass Co.

It would be difficult indeed to make a more attractive display of paints, varnishes, ornamental glass, mouldings, etc., than was made by the Winnipeg Paint & Glass Co. This firm are western Canadian agents for Ramsay's paints, Mander's English varnish, Pratt & Lambert's varnish, Baer Bros.' bronzes,

Holliston decorative cloths, Gilmour's oak veneer doors, electric maple flooring, Dickinson's fire and pressed brick, "Ironclad," "Invicto" and "Adirondack" Portland cement, and, in addition, are general wholesale dealers in plate, window and fancy glass, building paper, mouldings, etc., for interior decoration. Three frame houses, painted in nicely blended "Ramsay" colors, were shown on a platform at one side, while at the other were a row of handsome oak veneer doors. Near the doors was a general exhibit of mouldings and other interior finishings, including two hand carved, made-up oak newels, both of which found ready buyers. Above a 11 ft. wall ornamental glass, including acid, copper and lead work, were shown in a great variety of designs, while some dainty samples of bevelling and silvering in glass were shown on the counter. Attractive displays of paints, oils, varnishes, etc., completed an exhibit which constantly aroused attention from all classes of visitors.

#### Steele & Co.

One is always appreciative of work done in a thoroughly first-class manner and with businesslike promptness. Hardware and Metal appreciates the work done in connection with the accompanying illustrations by Steele & Co., photographers, Winnipeg, who took the great majority of the photographs, including practically all the best ones. This firm, it may also be stated, were awarded four first prizes by the judges for general photographic work, a decision they fully earned by artistic work.



Winnipeg Paint and Glass Co.'s Exhibit.



### The Fairbanks Co.

The first display seen on entering the Winnipeg Industrial Building was that of the Fairbanks Co., Winnipeg, Montreal, Toronto and Vancouver. The exhibit was one that no plumber, steam fitter or engineer could pass without study and interest. At one end was a large stand on which wrenches, valves, oilers—in fact everything in the line of engineers' and mill supplies—were shown. Similar goods were arranged along the wall for half the length of the exhibit. The other half of the display was made up to represent a model bath room, with tile floors and walls. Here a shower bath, a bath tub, lavatories, kitchen sinks, slop sinks, laundry tubs, closets, etc., in cast iron enamel were arranged to show each article to splendid advantage. Bath room, counter and platform scales were shown in both sections of the exhibit, while electric fixtures added to the general effectiveness. The Fairbanks Co. have already secured a firm footing in the trade in plumbing goods, mill and engineers' supplies, machine tools, etc., in the west, and their display served to emphasize to the trade the completeness of the stock carried by them.

### The Siche Gas Co.

Against the east end, between the two entrance doors of the middle Industrial Building, the Siche Gas Co. had an exhibit which aroused the attention of the hardware trade of the west. This firm are manufacturers and dealers in bicarburet of hydrogen gas apparatus, gas

fixtures, stereopticon supplies, carbide of calcium and special illuminating, cooking and power plant. All these goods were shown to advantage in the exhibit. The main feature of their display was their "Siche" gas generator, which consists of three main parts, the tank, the dome and the patent tubular feed-valve and float. All the parts are built as heavily as possible, and any model of the "Siche" machine later than 1903 will, with ordinary care, last a lifetime. The best guarantee of the safety, sound construction and economical operation of the "Siche" is probably the fact that it is not a casual invention, but the carefully thought out design of an expert mechanical engineer and draughtsman, and that it has been improved from time to time until now it is practically per-

fect. The Siche Gas Co. are desirous of securing agents for their machines in every town in the west, as well as in eastern Canada. They state that any one who can install a furnace can put in a "Siche" machine, and that the profits on it, for the tinsmith, are better than secured on furnace work. They invite the trade in all parts of the country to write for catalogues and further particulars.

### The Owen Sound Wire Fence Co.

The Owen Sound Wire Fence Co., Limited, had an exhibit which was both unique and attractive. Their triangular shaped structure of gates was very prominent.

### The E. C. Hill Mfg. Co.

Many hardwaremen found in the exhibit of the E. C. Hill Mfg. Co., Toronto, a display well worthy of their time and attention. This firm had a comprehensive line of bicycles and sewing machines, two lines found to offer good profits by hardware dealers. The "Canadian Empire Cycles," with double flexible cushioning spring frame, fitted with coaster brake, etc., was conspicuous in exemplifying the comfort and ease which can be combined with utility in a thoroughly modern and up-to-date wheel, when built by first-class mechanics of the best material, and with that care for detail which obviates and does away with the constant vexations so common with cheap wheels. All styles, roadsters, racers or spring frame, were shown.

In the "Canadian Empire" sewing machine this firm have a machine recognized by competent judges as being up-to-date and highly finished in every way. A good feature is a ball-bearing stand, which gives ease in running, thus saving the strength of the operator and enabling her to work much longer without "that tired feeling." Their library



Fairbanks Co. Exhibit.



Fairbank's Standard Scale Display.



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Display of the Office Specialty Mfg. Co.

cabinet, an entirely new design, is exquisitely finished in quarter-cut oak, and would be an ornament to any room. These machines have special embroidery attachment, which makes the work so simple that a child can do it. The operation of this attachment, both on account of its speed and the splendid results, proved one extremely fascinating to ladies of artistic temperament. As this firm is seeking agents in all parts of Canada, they invite the hardware trade to apply for further information regarding their bicycles and sewing machines.

#### Christie Bros Co., Limited.

An exhibit in the stoves section of the middle Industrial Building which was new to many western buyers, but which evoked much interest, was that of the Christie Bros. Co., Limited, western selling agents for the Canadian Heating & Ventilating Co., Owen Sound, Ont. The principle range shown by this company was the "Empire Queen" range, four styles of which were on view. This stove is made in either square or extended pattern, with or without high warming closet, and to burn either soft or hard coal or wood. One distinctive feature of this range is its construction, by which the heat, when baking draft is used, is forced around the oven twice, and in such a way that the heat is spread uniformly on all sides. Another feature is the fact that its iron castings and nickel trimmings are severely plain, the advantage of which is that there are no hollows into which dust may accumulate and become a nuisance to the

cook, an important point to a busy housewife. The "Empire Oak," two of which were shown, is a handsome heater in which either wood or any coal can be used. Another stove shown, but hidden in the cut, was the "Empire Special," a small coal or wood cook, without any nickel ornamentation except on the oven door. In the "Empire King" furnace Christie Bros had a furnace which was specially adapted for low cellars. Its good features are large radiating surface, large feed and direct draft damper, which is automatic, thus ensuring against coal gas explosions. This furnace, though new to Canada, has been in use for several years in New York

State, where it is one of the strongest sellers, and the Canadian Heating & Ventilating Co., who have taken over at large cost the Canadian rights, intend to make it a popular seller in Canada as well. They would like to hear from any of the trade who are looking for a good line.

#### The Office Specialty Co.

Merchants all over Canada are paying more and more attention to their office equipment, having learned that not only can time be saved but by a thorough system accounts can be better looked after, and in every way the business made to run more smoothly. For this reason the exhibit of the Office Specialty Co., Winnipeg and Toronto, was one of the most interesting to business men. Among lines shown were counter and partition work, catalogue cabinets, office desks and tables, Shannon filing cabinets for card indexes, legal blanks and documents, storage sections, roller book shelves, sectional bookcases, metal grill work, bank and office furniture, metal omnibuses, steel filing cabinets; in short, office furniture of all kinds. All of the articles produced by the firm are finished in a style thoroughly in keeping with the standing of the company, and would be ornaments to any office, as well as fulfilling a useful purpose. The company furnish offices throughout with all the furniture and appointments of a first-class office. The furniture is all made at the company's factories in Newmarket, Ont., and then shipped from there to all parts of the world. A line which is peculiar to themselves is that of manufacturing metal fixtures and metal cabinets and vault fixtures of all kinds. Metallic postoffice boxes are also a feature of manufacturing to which



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Exhibit of the Christie Bros. Co. Limited



this firm pay close attention. Their card systems are in general use throughout Canada.

#### Canadian Oil Co., Limited.

In design and execution the exhibit of the Canadian Oil Co., Limited, Winnipeg and Toronto, was one that compared favorably with the best at the exhibition. In fact, so good was it that the judges awarded it the bronze medal, the highest award ever given for oils at Winnipeg. The central view of the exhibit shows a pyramid of "Sterling" lubricating oils, candles, petroleum, glycerine, benzine, gasoline, castor oil, harness soap, etc., about a superb white column in wax. The booth was arranged a big tank covering this display, two stands on the outside front corners carrying "Sterling" prepared paints and varnishes. This firm are exclusively Canadian manufacturers of oils, the plants being entirely owned and operated by Canadians. They use the term "Made in Canada" on all the paint packages, and make it their boast that when they use it they back it up by a quality of goods that no Canadian will hesitate to use. They carry high grade cylinder, engine, dynamo, steam separator and general lubricating as well as a full line of illuminating oils. They invite enquiries from the trade regarding any of their lines.



Exhibit of Banwell Fence Co.

#### "Ideal" Woven Wire Fence.

The McGregor-Banwell Fence Co., Limited, Walkerville, Ont., had their exhibit apart from the general fence displays, and were thus able to secure more direct attention than would have otherwise been possible. The nature of the display, consisting of three fences, firmly set up, and a pyramid of gates, was such as to show clearly the good points of their fences. To visitors these good

points were explained and catalogues given away, in which illustrations showed the various designs of "Ideal" fences, the "Ideal" steel clamp stretcher, and "Ideal" gates, and in which were full directions to the farmer for setting and bracing an end post and for the general fencing work. The firm's western representatives are Merrick, Anderson & Co., Winnipeg, and the trade are invited to write to that firm or to their Walkerville office, for literature for distribution, and for further particulars regarding the "Ideal fence."

#### Maritime Heating Co.

From the most distant province in the Dominion, the Maritime Heating Co., Amherst, N. S., sent for the inspection of western buyers a number of hot-water heaters, which are calculated to fill a big need in the west. The distinctive feature of this furnace is that it will burn soft coal without the need of cleaning. This fact, together with its strength of construction and economy of heat production, is likely to make it a popular one, judging from the comments of the trade who examined it.

#### Henderson Roller Bearing Mfg. Co.

The exhibit of the Henderson Roller Bearing Mfg. Co., Limited, Toronto, attracted much attention, as it did at Toronto last year. The saving of power seems an interesting subject, and the people watching this exhibit certainly had a chance to see how much more economically machinery can be run with roller bearings than with the ordinary metal bearings.

The device of the Henderson roller bearing consists of bearing rings and rollers journaled in the rings, so as to bring the contracting parts near the centre of the roller. The weight rests

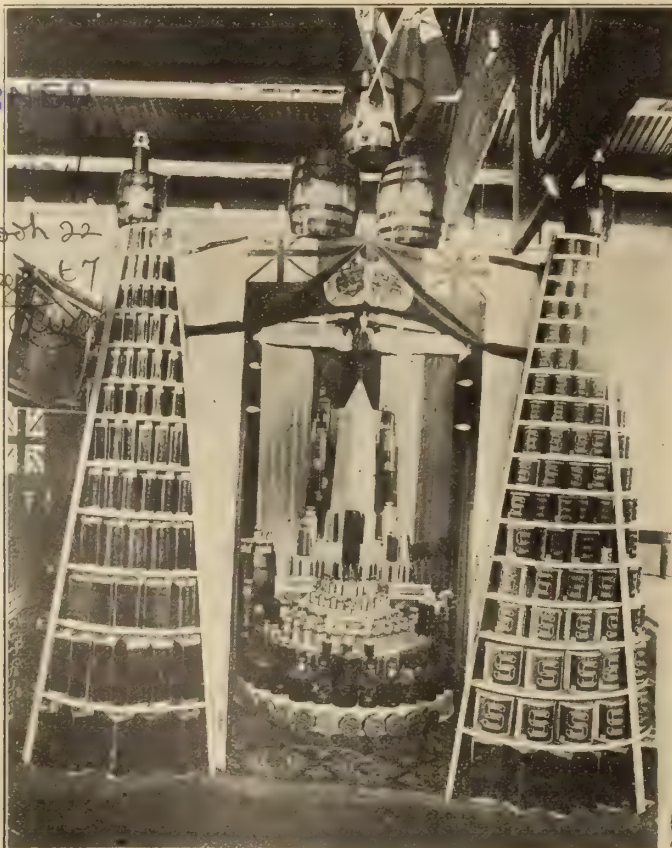


Exhibit of Paints and Oils by Canadian Oil Co., Limited.





Henderson Roller Bearing Exhibit.

on the body of the roller, the pintles of which carry round the cage. Journalled on the tie rods are the spacing rollers, which contact the faces of the bearing rollers and form a rolling contact therewith, thus relieving the pintles of part of the strain of keeping the rollers in line. The end thrust is provided for by loosely abutting end thrust means.

These rollers are specially adapted for electric generators and motors, and in fact all quick moving machinery.

#### Dominion Cartridge Co., Limited.

The hunting season is now fast approaching, and the exhibit of the Dominion Cartridge Co., Limited, besides being attractive and interesting to all interested in sporting goods, was very much in season. Their exhibit was indicative of the processes of manufacture. In one department, as may be seen in the cut of the exhibit, was displayed the different stages in the manufacture of an ordinary metallic cartridge. The cups were shown, then the cups annealed, then in consecutive order shells after the first drawing, after being annealed, after the second drawing, after being again annealed, after third drawing, and so on the completed cartridge. Along the foot of the exhibit was a case displaying the paper shot shells in the different stages of manufacture.

As indicative of the chase, the exhibit was surmounted by two imposing looking deer heads.

#### EXTENDING A RAILWAY.

Mackenzie & Mann propose to construct a line of railway from a point on the Great Northern Railway near Quebec across the new Quebec bridge and up the valley of the Etchemun River to the international boundary. Crossing the State of Maine an air line is taken, with Woodstock, N.B., as the objective

point. From Woodstock the line runs to Fredericton, thence via Moncton, through the northern portions of the counties of Westmoreland and Cumberland to Pugwash. From Pugwash the company propose utilizing the short line of the Intercolonial to New Glasgow, where they will connect with the proposed line which Messrs. Mackenzie & Mann are constructing to Country Harbor, N.S., the proposed new Atlantic port. A branch is laid down on the map from the main line down the valley of the St. John River to the city of St. John, N.B.

#### COPPER CLIFF CO. MEET.

The annual meeting of the Copper Cliff Mining Co., Limited, was held at Moncton, N.B., on August 2. The re-

ports and accounts presented show the company to be in a good financial position, notwithstanding the numerous rumors to the contrary. A considerable sum has been spent in prospecting and opening up the ore outcrops at various points, and good ore bodies have been met with without flagging the leads. The ore now being mined shows fine high grade copper, and will also carry gold and silver values as well. There is every reason to believe that the near future will witness the development and working of this property on a large scale. The directors elected for the ensuing year were as follows: F. W. Givan, Geo. J. Robb, S. S. Ryan, M.P.P., Hon. F. J. Sweeney, W. J. Weldon, of Moncton; A. E. Brown and W. H. McQuade, St. John; J. P. Sherry, Memramcook; E. A. Charters, Sussex; J. B. McDonald, P. E. Island; and Jas. Barnes, M.P.P., Buctouche.

The date fixed for the starting of the steel plant at Sault Ste. Marie is September 15.

#### VISITING THE EAST.

Mr. Geo. W. Baynes, representing the Preston Metal Shingle and Siding Co., Limited, was a visitor to the Montreal and Quebec trade this week. This was Mr. Baynes' first trip east since the destruction of their factory by fire a month ago. Though almost completely wiped out they have everything in good running order again and the wants of their customers are receiving close attention.



Exhibit of Dominion Cartridge Co.



### IRON AND STEEL BOUNTIES.

On August 9 Sir Richard Cartwright informed the House at Ottawa that during the year ending June 30, 1901, \$880,549 was paid out in bounties on pig iron and steel ingots. This is less than for the proceeding year by \$521,255. During the year ending June 30, 1903, bounties on pig iron, puddled iron bars and steel ingots, to the extent of \$1,401,804, were divided as follows: Algoma Steel Co., Limited, \$48,297; Canada Iron Furnace Co., \$87,172; Deseronto Iron Co., \$18,675; Dominion Iron & Steel Co., Limited, \$960,979; Hamilton Steel & Iron Co., Limited, \$148,275; John McDougall & Co., Drummondville, \$5,243; and Nova Scotia Steel & Coal Co., Limited, \$132,860.

### BRITISH TRADE WITH CANADA.

The British Board of Trade returns for July show a decrease in imports of \$23,483,500, principally in foodstuffs, \$18,284,445, and wool, \$3,345,265; and a decrease in exports of \$5,460,000, mainly in iron, steel and manufactures thereof.

The imports to Great Britain from Canada during the month of July were as follows:

|                                |          |
|--------------------------------|----------|
| Cattle, 14,391 head .....      | £255,815 |
| Sheep and lambs, 5,274 head .. | 8,676    |
| Wheat, cwt., 814,100 .....     | 292,379  |
| Wheat, meal and flour, cwt.,   |          |
| 235,830 .....                  | 110,893  |
| Peas, cwt., 12,590 .....       | 3,774    |
| Bacon, cwt., 119,274 .....     | 260,913  |
| Hams, cwt., 32,983 .....       | 80,435   |
| Butter, cwt., 36,728 .....     | 157,695  |
| Cheese, cwt., 272,951 .....    | 571,525  |
| Horses, 31 head .....          | 1,125    |



Merrick, Anderson & Co.'s Display of Stoves.

### A FLYING TRIP.

Mr. Geo. H. Macfarlane, assistant manager E. W. Gillett Co., Limited, Toronto, was a caller at the Montreal offices of Hardware on Tuesday. Mr. Macfarlane was taking a flying trip to Quebec and Sherbrooke. He reported that though his company had been handicapped in getting their orders out since the destruction of their Toronto factory, they were now getting into fairly good shape. They will be in their new King street west factory, October 1st, and with every convenience and improvement in same anticipate having every order promptly attended to.

### TIDINESS IN DISPLAYS.

**T**IDINESS and neatness in dress are to be commended in every walk of life, and the well-dressed man or woman unconsciously commands deference and respect. By "well dressed" is not meant richly or gaudily dressed, but merely an appearance indicating care and attention. The sloven in dress rarely commends himself to consideration.

Just so is it with the store or the window. It is quite as important for the grocer to have neat and fresh displays as it is for him to be careful in his dress. His store will become so much the more interesting, not merely to every customer who enters it, but to every passer-by who glances at the windows.

Changes of dress on the part of persons are frequently effected for the mere sake of show, and are thus not exactly commendable, but it must be said on the other hand, that frequent changes and rearrangements of the contents of the store serve a useful and praiseworthy end. Every idle moment can with profit be spent in devising fresh ways for adding variety to the stock.

### EXPORT TRADE IN SCALES.

The Gurney Scale Co., Limited, of Hamilton, Ont., are putting in a lot of new machinery, and an architect is preparing plans for an enlargement of the factory. The firm's business is rapidly growing abroad as well as at home and particularly in the heavy lines of scales. The firm now exports regularly to a number of European countries, Australia, New Zealand and the West Indies.

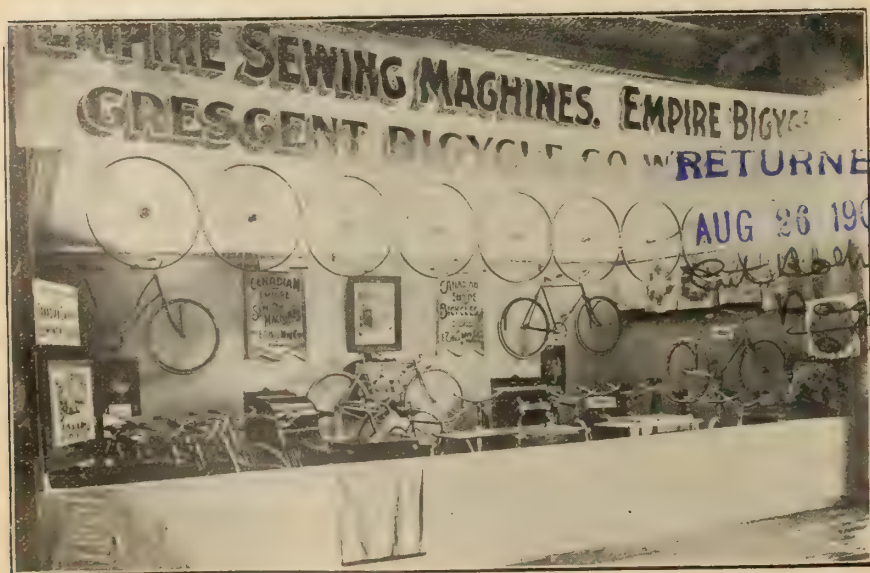
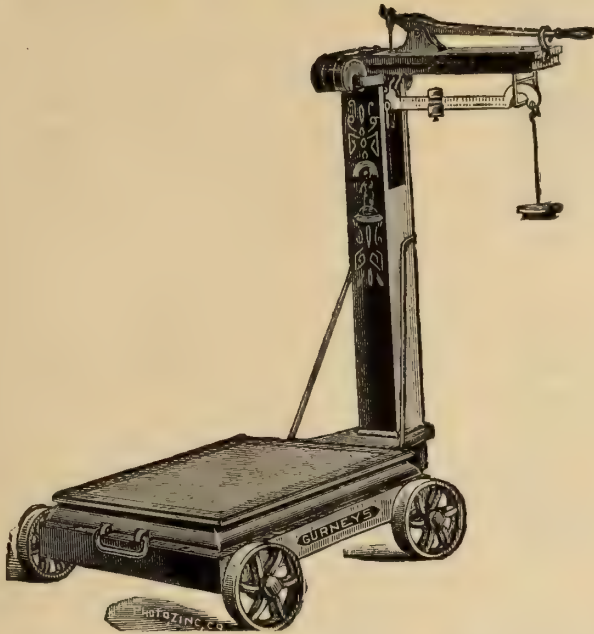


Exhibit of the E. C. Hill Mfg. Co.

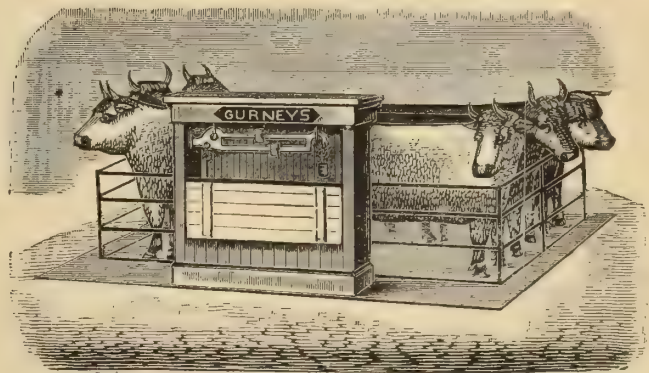


# The Gurney Standard Scale



ABSOLUTELY  
ACCURATE  
—AND—  
RELIABLE.

THE BEST OF  
MATERIAL  
—AND—  
WORKMANSHIP.



RECOGNIZED THROUGHOUT CANADA AS

## "THE STANDARD"

We Make Scales of Every Description.

Established 1856.

WE OWN AND CONTROL OUR PLANT AND OUR PRODUCT IS THE STANDARD

## "FOR QUALITY"

SEND FOR CATALOGUE AND PRINTED MATTER.

It pays every Hardware Dealer to push the sale of our scales. THE TRADE PROTECTED.

### THE GURNEY SCALE CO., HAMILTON, ONT., CAN.

Eastern Warehouse :  
THE GURNEY-MASSEY CO., Limited,  
MONTREAL, QUE.

Western Warehouse :  
The Tilden-Gurney Co., Limited  
WINNIPEG, MAN.





Exhibit of the Montreal Pipe Foundry Co.

**Canadian Iron & Foundry Co.**

The exhibit of the Canadian Iron and Foundry Co., Limited, consists, as may be seen from the cut, of machined car wheels. This firm manufactures all kinds of high-grade machined wheels for all classes of service, and also of grey iron castings. Their works are at St. Thomas and Hamilton, and head offices at Montreal. To the mechanical mind this exhibit could not help but prove interesting. Those examining into the detail work of these machined wheels would be gratified to find a high-class work.

**The Montreal Pipe Foundry Co., Limited**

The pipe exhibit of the Montreal Pipe Foundry Co., Limited, would be of much interest to those connected with this class of product. The exhibit consisted chiefly of joints, elbows, reducing couples, curves, etc., of various kinds. The exhibit was backed with a pile of piping of all sizes.

This company have their works at Three Rivers, Que., and their head offices at Montreal.

**GOLD MEDAL FOR LAWN MOWER.**

Taylor-Forbes Co., Limited, Guelph, are in receipt of a letter from their agents in Constantinople which tells of the award of a gold medal for their exhibit of lawn mowers. The agency writes: "We beg to inform you that your 7 lawn mowers exhibited by our firm at the Royal International Exhibition of 1903, at Athens, Greece, have been awarded by the jury a gold medal. We hope you will be pleased for what we have been able to secure for your goods, which, of course, fully merit the

award. We shall forward the medal and diploma when they are ready."

Taylor-Forbes Co. are rightly proud of the fresh distinction thus accorded to their "Woodyatt" mower. This machine is sold throughout the British Empire and in Turkey, Greece, Egypt, Bulgaria, Roumania, Servia, and Russia. With such an extensive foreign field, to say nothing of the heavy domestic demand, one can see why the makers are being compelled to enlarge their plant. A new building 300x175 is on the eve of construction. The growth in this firm's business in the two years of their history is almost beyond belief, but the principals have long enjoyed a reputation for "doing things," and to those

who know them no record of success is too good.

**PROGRESS OF THE GREAT WEST.**

SIR WM. VAN HORNE, chairman of the board of directors of the Canadian Pacific Railway, has just returned from a trip to the Pacific Coast. He is credited with the following statement regarding his visit:

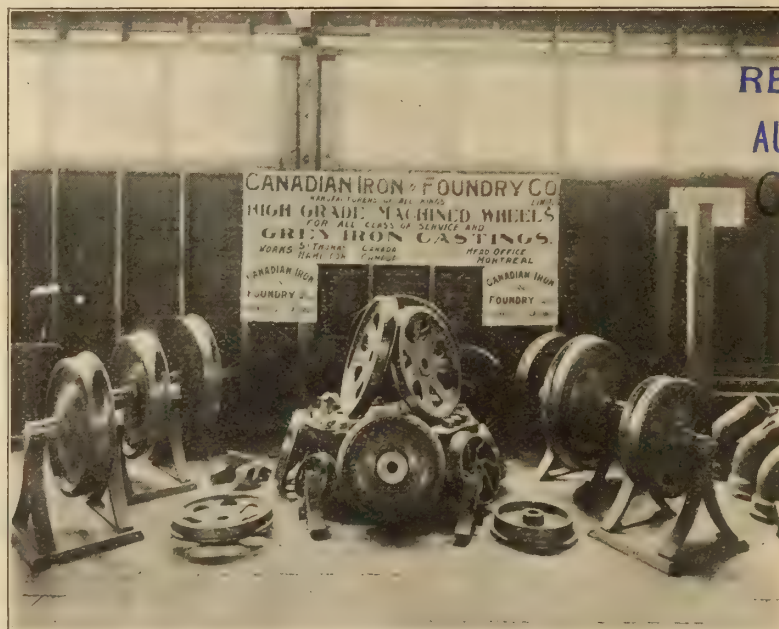
"I have been through the entire Canadian west many times, but the trip that I have just concluded is the most satisfactory I have ever made, because on it I witnessed the realization of the hopes of those who built the Canadian Pacific Railway—hopes that were shared in by few other people in the world.

"What was more gratifying to me than anything else on the trip was to see the magnificent way in which the country is developing, and this applies just as much to the cities as to the agricultural and mining districts. Winnipeg has been transformed within 7 or 8 years from a big prairie village to a handsome, substantial and most attractive city. It has indeed become a charming place of residence, as well as a great commercial centre.

"Calgary and Vancouver also have improved immensely in every respect, and this can be said of nearly all the towns I saw on my trip through western Canada.

"There is an all-pervading prosperity, and it is reflected on the faces of everybody you meet.

"When it is considered that all the present development of the Northwest has come from the cultivation of an exceedingly small percentage of the cultivable land, the future development must be regarded as being almost without limit."



Canada Iron Foundry Co. Exhibit.



## CANADA PAINT CO.'S PICNIC.

THE employes of the Canada Paint Co., Montreal, held their 12th annual picnic at Sherringham Park, on July 30, the company having engaged the steamer Duchess of York, for the day. The employes and friends, to the number of 700, accompanied by the 85th Battalion band, left St. Gabriel lock at 9 a.m. After a pleasant sail on Lake St. Louis, they arrived at Sherringham at 12 o'clock, where dinner was at once served.

Much of the success of the games which followed was due to W. Pratt, of the Acme Can Works, John Thompson, superintendent of the Paint Works, and Bandmaster Thibeault, who acted as judges. The games and races were enjoyed to the full, especially by the children, and the heart of everyone of them, from one month to ten years old, was gladdened by a prize, and a bag of candies. Mr. Robert Munro attended the picnic in the afternoon and his presence was appreciated by the merry-makers.

The following were the results of the events:

Running long jump—1, A. Todd, 18 feet 4 inches; 2, H. Heale, 18 feet 2 inches; 3, P. Molloy, 18 feet 1 inch; 4, F. Mereault, 18 feet.

Young ladies' race—1, Miss J. Smith; 2, Miss A. Reeve; 3, Miss E. Rooney; 4, Miss S. Nicholson.

Smoking race—1, A. Lesperance; 2, E. Lamarche; 3, D. Willock; 4, J. Monty.

Throwing 56-lb. weight—J. F. Thibault; 2, W. Lamont; 3, A. Biron; 4, J. Shepherd.

Married men's race, 35 years and under—1, D. Brown; 2, R. Mallette; 3, J. Shepherd; 4, S. French.

Young ladies' race (open)—1, Miss Earle; 2, Miss Gillett; 3, Miss Ennis; 4, Miss French.

100 yards dash—1, D. Brown; 2, A. Todd; 3, H. Heale; 4, A. Biron.

Married men's race, 35 years and over—1, O. Bezeau; 2, W. Higgins; 3, E. Marlow; 4, J. Reid.

Married ladies' race—1, Mrs. Bezeau; 2, Mrs. Lamont; 3, Mrs. Martel; 4, Mrs. Beaudry.

Married ladies' egg race—1, Mrs. Coleman; 2, Mrs. Bezeau; 3, Mrs. Lamont; 4, Mrs. Mallette.

Boys' race, 18 years and under—1, G.

Luffman; 2, W. K. French; 3, J. Verinlinger.

Band race—1, J. Brown; 2, B. Leblanc.

Tug-of-war (married vs. single)—This was an easy victory for the married men.

The tug-of-war was a very laughable event. Just as the event was decided the rope broke, participating both sides to the ground. The whole party returned home in the evening after a very enjoyable day.

## PACKING MACHINERY FOR EXPORT.

MANUFACTURERS are sometimes slow to realize the importance of having their machinery shipped in a proper manner. The extra care necessary in careful preparation of goods is more than counterbalanced by the satisfaction of the customer and the assurance of the arrival of the goods in good condition.

In a paper read by Paul Roux, before

the American Chamber of Commerce, he brought out the factors to be considered in this direction.

Packing comprises the series of operations which have for their object the preservation of the machine in good condition from the time it leaves the producing factory to the time of final delivery at the works of the purchaser, and the care with which these operations are carried out, affects largely not only their cost, but expenses of transportation, etc., which may amount to a considerable percentage of the selling price.

Preparation of Machines—After careful inspection all machine tools should be more or less dismantled, and perhaps the most important consideration here is its volume of cubage when packed for shipment. Marine freights are generally reckoned 40 cub. ft., so the exporter must see that the weight does not occupy more than 40 cub. ft. per ton.

Dismounting Fragile Parts.—All fragile projecting parts should be removed and tagged with labels, fully explaining position on machine. All delicate parts



Money  
Makers

Utica Nippers  
and Pliers  
See the GREEN  
BOOK.

UTICA DROP FORCE & TOOL CO.

Mfrs. of Nippers and Pliers.

296 Broadway, New York City.

Canadian Sample Room: 215 Coristine Bldg., MONTREAL.

SMITH & HEMENWAY CO.,

Mfrs. of Cutlery and Hardware Specialties.

ALLEN C. JENKING, Canadian Manager.

Scheip's Patent  
STOVE PIPE

Manufactured only by

E. T. Wright & Co., Hamilton, Canada



# COPLAND & COMPANY, Importers.

107 ST. JAMES STREET, MONTREAL.

146 WEST REGENT ST., GLASGOW, SCOTLAND

**FIRECLAY GOODS.** Bricks, Clay, Ewell Clay, Gannister, Retorts.**CHEMICALS.** Alum, Bluestone, Borax, Copperas, Saltpetre, Soda, etc.**POTTERY GOODS.** Ball Clay, China Clay, Cornish Stone, Flint, Lead—Red and White.**METALS.** Pig Iron, Angle Iron, Black Taggers, Hoops, Sheets, Tin and Tinplate.

— A L S O —

**WHITING, CEMENT, CHALK, CASTOR OIL, GLYCERINE, GLASS LUBRICATORS, GLOVER'S GAS METERS.**

— YOUR ORDERS AND ENQUIRIES SOLICITED. —



## Quality

The quality of an axe should be the most important point for the retailer to consider. Don't let your axe trade get away from you by buying low grade axes. They may look all right and sell well for a time, but in the end quality always counts. If you want to build up a large and permanent axe trade buy

## Kelly Axes

should be protected against rough handling.

**Preservation**—Finished parts should be coated with some preparation which should preserve against rust, but not attack the metal.

**Packing Cases**—These must fulfil two requirements. Effectually protect the machine against all shocks and injury, and facilitate the handling of the machine, and provision must also be made for the examination of the machine in the Custom House.

Lists and Drawings should accompany the machine, carefully enveloped in waterproof paper, and tacked inside the case.

Exterior marks for identification should be very clear, and the name of port of discharge should be in letters at least 2 inches high. Finally, exporters are urged to paint a black circle round the heads of all nails and screws, which should be removed in order to unpack the machine with the least work and without injury to any parts.

The trade journal ad that aims at nothing more than immediate orders interests that very small fraction of readers who are contemplating purchases. But the advertising built for general simplicity impresses every reader, and when purchases are made a year later, or five years later, the advertiser is still a factor to be reckoned with.—Mahin's Magazine.

A slovenly advertisement may attract attention, but it is likely at the same time to breed disgust and fill the mind with distrust as to the thing advertised.

## Our Stock

of axes is very complete, consisting of the best selling lines of the leading manufacturers. By ordering now you are assured of first choice. Later on in the season, it is often an impossibility to supply some lines of axes. The demand exceeds the supply. Write at once for prices.

**John Bowman**  
Hardware  
and Coal Co.

LONDON. — CANADA.





## WALL PAPER.

### PRESENT DAY MURAL DECORATIONS.

By Arthur Seymour Jemin, S.

THE public taste in mural decoration fluctuates almost as much, if not as rapidly, as that in ladies' dresses. The requirements of to-day are very different from those of ten years ago, and, no doubt, in another decade other and dissimilar styles will be in vogue. Indeed, the demand for novelty, while not so pronounced in England as it is in some countries abroad—the United States, for example—is very real, so that art students and designers may always be reasonably sure of finding a market for their work, provided, of course, that it is novel and really decorative.

We may leave aside for present consideration those features of modern decoration which have proved to be but short-lived, and direct our attention to the styles which have remained in favor for a long time, or appear to be likely to do so.

Taking wall papers in their various grades first, the question has often been asked whether the fashion is set by the manufacturers, or whether it is distinct demand on the part of the public. Probably each contributes to the result. The wall paper manufacturer who produces a new style, or a series of hangings quite out of the ordinary run, usually "makes haste slowly." The production of a single new design means the risk of not a little money, as the cutting of the blocks or cylinders from which the design is printed is somewhat expensive. For this reason only a few patterns that are distinctly novel are brought out in one season. If they meet with favor—if the sales justify it—the "line" is largely increased the following year.

It is worthy of note that a custom of the wall paper trade, widely followed, is to reprint a selection of certain designs every thirty years or so. At present there is a demand for pearl, white moire, and striped papers that were popular in the "sixties."

We may now consider the new styles which are most sold to-day, and first among these must be placed "in-grain" papers, or those which are colored in the pulp from which the paper is made. This class of paper is usually either quite plain, or printed with a stripe, or with a small dotted pattern technically known as "powdering." This pattern is almost always printed in the same color as the ground, but a little darker. Often the difference in tint between ground and pattern is so small that the design can hardly be discerned. The wide use of these plain or nearly plain papers is generally admitted to be one of the best evidences of the process of applied art in mural decoration in recent years.

It may, at first sight, be thought that the use of plain papers does not give much encouragement for the artist. As a matter of fact, however, they are but rarely used, excepting in conjunction with a comparatively bright and often elaborate frieze. The reader who has studied design will be quick to understand why this combination gives such satisfactory results. We will take a well-furnished dining-room as an example. Here we probably have a good many pictures upon the walls, and the plain background, if the proper hue is chosen, forms a setting or foundation for them, which adds to their beauty instead of detracting



from it, as is almost invariably the case when a conspicuous pattern is employed. The "powdering" design, so unobtrusive, yet serves to nicely break up those portions of the surface where there are no pictures, while the broad, boldly-drawn frieze, probably full of coloring, gives a fitting cap to the wall surface, and forms a combination effective and decorative. And, be it observed, it hardly matters how strong the colors are in the frieze, because it is above the line of pictures, while the expanse of plain surface will probably require a firm coloring in order to produce a proper balance of parts and a satisfactory whole.

It is in the design of the frieze that the artist will find his greatest opportunities. We do not now refer to the ordinary patterned frieze or border, designed on what Mr. Lewis F. Day calls the "turn-over" principles—that is, of a pattern having its left and right identical—but rather to that class of design which is most sought at the present time. There are two divisions to this class, or perhaps they might be more properly considered quite separately. The first is the "landscape frieze," the second the "hand-stencilled frieze."

#### Stauntons Limited.

A very cordial invitation is extended by Stauntons Limited, wall paper manufacturers, 934 Yonge street, to their customers and the wall paper trade in general to visit their factory during the Toronto Exhibition. The company will also have rooms at the King Edward Hotel during the exhibition, and all visitors will be made very welcome.



### What is Glue?

(Continued from last week.)

When thoroughly cleansed, the raw material is subjected to a further washing in clean, cold water mixed with acid, to neutralise the action of the lime. The second washing takes place in smaller pits called washers, which are fitted with a revolving drum, into which are fixed rounded claw-like spokes resembling a reaper's hook, only that they are not sharp or pointed. This drum turns, and the spokes beat the water much after the manner of the paddle of a steamer, except that they revolve backwards instead of forwards, in order not to lift the material too much out of the water. In this way the second washing is done much more quickly, more effectively, and more economically than by any other means.

The cleansing over, the stock is laid out to dry in the air till required for boiling. This completes the first stage in the preparation of the raw material for the manufacture of glue. From this point there are two different methods employed for the extraction of the glutinous product from the dried stock—the first, a simple primitive method which has been in operation for over one hundred years, and the second, a modern method where inventive science enters largely into the process for production of all other special kinds of glue, according to the purpose for which they are required. By the former method, the "stock" is put into loosely-woven sacks more like nets with extremely narrow meshes than anything else. These are then lifted by means of an old-fashioned crane into circular kettles or tanks filled with hot water, which are heated round the sides and on the bottom by steam pipes. After a time the action of the heat extracts the glutinous matter in the "pieces," and after concentration this is run off through pipes into another tank. From this the dark turbid-looking fluid is drawn off into what are technically called "coolers," in which the glue is allowed to settle till it takes the form of a soft pulpy jelly.

#### THE DIFFICULTIES OF DRYING.

The jelly, when sufficiently solidified, is carefully taken out of the coolers, cut into small cakes by a cutting machine, and placed on nets preparatory to the next stage.

The process up to this point has been comparatively plain-sailing, but now begins the difficult operation of drying —

perhaps the most precarious part of the whole manufacture. The glue in its congealed state contains a considerable quantity of water, and to prevent decomposition or putrefaction during drying this must be got rid of as quickly as possible. For about eight months in the year the drying is accomplished in the open air. The stalks of nets upon which the cakes of glue are placed are covered by A-shaped roofs forming little covered sheds. The drying process is attended by many risks, for if the sun strikes the cakes of jelly while they still contain water they may become so soft as to sink through the narrow meshes of the net frames on which they lie, or they may dry so quickly as to prevent them from contracting to the proper size without numerous cracks and fissures. On the other hand, if frost supervenes, numerous cracks may be formed from the congelation of the water in the cakes, or a shower of rain may cause much extra work, worry, and damage. Consequently, there is need of careful supervision both by day and by night to guard against these dangers. Once the cakes are sufficiently dry they

are threaded on strings and hung up from the ceiling to thoroughly harden, a process which varies in the time required according to the atmospheric conditions. Even when hard the article is not finished. It has a dull and altogether unattractive look, so in order to give it a better market appearance, each cake is dipped in water and rubbed over with a wet brush. This cleans the surface, and gives the cakes that bright varnished look with which the public are familiar.

### No More Loose Hairs.

If there is one thing more than another that will try the patience of your customer when painting, it is to use a brush which sheds loose hairs. No doubt you are aware of this, and have wondered why this evil has not been done away with long ago. The United Factories, Limited, manufacturers of Boeckh's and Bryan's standard paint brushes, have lately adopted a method of cleaning out all loose hairs which overcomes this unpleasantness, and certainly this will prove a strong selling argument for their make of brushes.

## Refined Gas Tar, Coal Tar, Roofing and Paving Pitch.



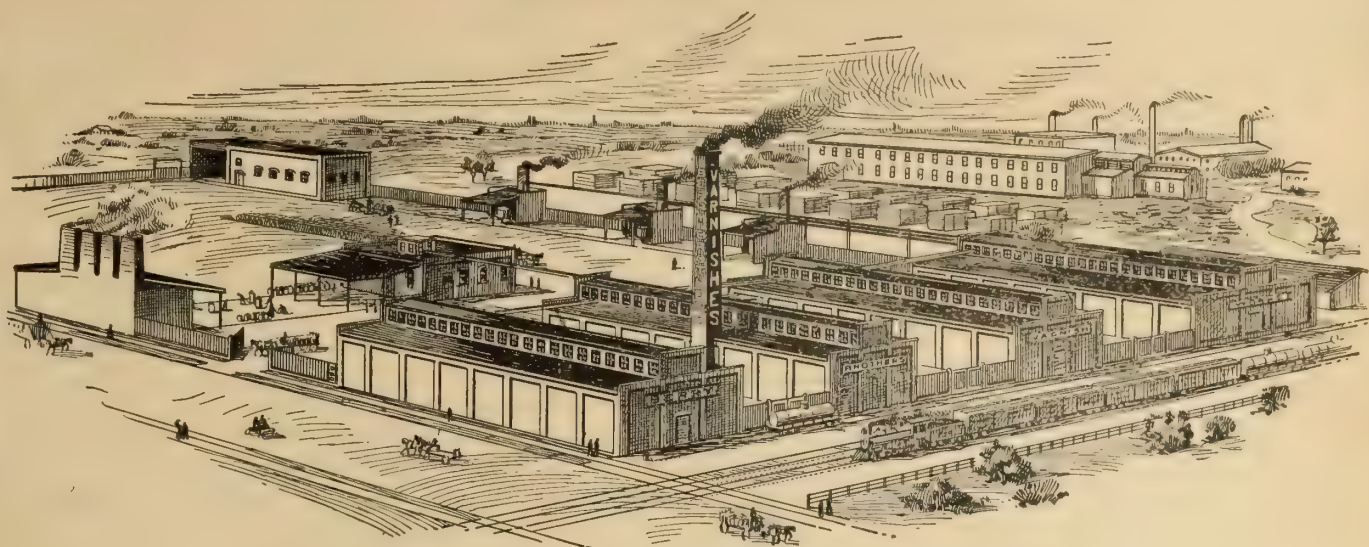
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Safest goods to handle, surest and most reliable goods to use.

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## Paint and Oil Markets

### Quebec.

Office of HARDWARE AND METAL,  
232 McGill Street.

Montreal, Aug. 12, 1904.

**J**UST now and, as has been the case for some weeks, there is a fairly active tone to the paint and oil market. There has been practically no dull period to the trade this season, but a continued brightness since the opening up, in Spring. Considerable of the local business is due to building operations, although it is not at all the most important channel. Industrial concerns, particularly agricultural implements, and wagon makers, are consuming large quantities, while the ordinary retail trade continues bright. Prices unchanged. At the present high price of turpentine, parties are using as little of it as possible.

**Ground White Lead**—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

**Dry White Lead**—\$4 in casks and in kegs \$4.25.

**Dry White Zinc**—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

**White Zinc (ground in oil)**—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

**Putty**—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

**Orange Mineral**—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

**Red Lead**—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

**Litharge**—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

**Turpentine**—Single barrels, 82 1-2c per gallon; two to four barrels, 81 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

**Linseed Oil**—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

**Shellac Varnish**—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

**Mixed Paints**—\$1.20 to \$1.40 per gallon.

**Castor Oil**—8 3-4 to 9 1-4c in whole-sale lots, and 1-2c additional for small lots.

**Canadian Paris Green**—Barrels 13 1-4c; arsenic kegs 13 1-2c; 50 and 100 lb. drums, 14c; 25-lb. drums, 14 1-4c; 1 lb. packages, 15c; 1-2-lb. packages, 17c; 1 lb. tins, 16c. Terms 2 per cent., discount for cash in 30 days or 90 days net.

**English Paris Green**—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

### Ontario.

Office of HARDWARE AND METAL,  
10 Front Street East,  
Toronto, Aug. 12, 1904.

**F**OR this time of the year things are moving very briskly on this market. This is the holiday season, however, and of course the market is quiet. Glass is very firm this week, but prices remain unchanged. Turpentine keeps firm at last week's quotations.

Quotations at points of production are unchanged. Linseed oil also remains firm at quotations of last issue. The demand for white lead keeps fairly good, as also does that for mixed paints, varnishes and dry colors. The demand for Paris green is falling off, dealers having stock enough for the remaining part of the season. All quotations remain unchanged since last week.

**White Lead**—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

**Red Lead**—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

**White Zinc**—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

**Shingle Stain**—In 5 gallon lots, 60 to 85c per gallon.

**Paris White**—90c to \$1 per 100 lb.

**Whiting**—60 to 65c per 100 lb.; Gilders' whiting, 75c.

**Shellac**—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

**Linseed Oil**—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

**Turpentine**—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-

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SO MUCH EXPERIENCE  
IN MAKING PAINTS  
SHOULD COUNT FOR  
SOMETHING, AND  
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**I**T is nearly thirty years since we commenced to manufacture Paints, etc., and in all that time we have been closely studying every detail of the business in order to bring our products to the borders of perfection. We have succeeded (nothing succeeds like Success) and continued effort shall always back us up. Meanwhile all the experience of 30 years and the best raw materials are producing the finest quality of **White Zinc, White Lead, Colored Paints, Putty, Ready-Mixed Paints for house painting, Varnish and Oil Stains**, and specialties for other purposes, also the highest grades of **Coach and House Varnishes, etc., etc.**

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### Wagon and Implement Paint

Ready for use, easily applied, dries quickly with an exceedingly durable varnish gloss finish. This line is the most economical on the market for this class of work. 5 colors; gals., ½ gals., qts., pts

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### BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size. Bronze Liquids, etc.

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SHALL WE SEND YOU  
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"SOLARINE" POLISHES  
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## Linseed Oil

To-day's price in London is £18 1s od. I offer 50 barrels, raw, at £17 15s od, c.i.f. Montreal, which price with duty is less than 41c. per gallon. Also 50 barrels refined at £19 5s od, c.i.f. Montreal.

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RAILWAY, CARRIAGE AND BOAT VARNISHES.

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Our Distributing Centres keep down your freight charges and give a speedy delivery

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## We Don't Ask Much.

We only ask for a trial order and we are satisfied that *you will ask us* for the second. "Island City" paints make their own way. Sterling quality is the secret.

**P. D. DODS & CO., Montreal, Toronto, Vancouver**



# Paint the Farm Buildings.

1. There are many farmers who allow their dwellings and farm buildings to go unpainted year after year under the delusion that they are saving money by so doing.
2. How often one sees good, substantial buildings exposed to wind and weather for years without protection.

Such houses are sure to deteriorate in value, to say nothing of the loss in appearance.

3. An unpainted building on the farm gives it a run-down appearance no matter how well kept the grounds.

Paint applied to all the buildings will increase the selling price, which is another way of saying, will increase the value.

4. A certain amount of pride exhibited in the farm buildings and grounds gives the would-be purchaser the impression that the entire farm is in good condition.

5. Well-painted buildings lend an attraction to the homestead that the young people of the family are sure to appreciate.

They add an incentive to further beautify the home.

6. The work of painting is not difficult. With the best of ready mixed paint, such as manufactured by **THE CANADA PAINT COMPANY**, the farmer may, if he find the skilled labor too expensive, do the work himself.

7. Time to paint. A dry, calm period is the best, and it should be neither too cold nor too hot. Avoid painting while the wind is blowing, as dust particles adhere to the fresh paint, causing it to present a most unsightly appearance.

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MONTREAL or TORONTO

Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

**Glues**—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

**Putty**—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

**Plaster Paris**—New Brunswick, \$2 per barrel.

**Liquid Paints**—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

**Barn Paints**—55 to 70c per gallon.

**Bridge Paints**—75c to \$1.

**Castor Oil**—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

**English Paris Green**—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

**Canadian Paris Green** (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

## Window Glass.

MONTREAL.

Trade in window glass is not in a very satisfactory condition at the present time. The recent changes in the tariff upset business somewhat and it has hardly recovered its former equilibrium. The prices quoted are merely nominal and we have no assurance that they are strictly followed. We quote: First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70 seventh do., \$5.20, and eighth do., \$5.70. The discount on 50 feet is 20 per cent, and on 100 feet 33 1-3 per cent. There has been no change in prices for diamond star or double thick. First break, 50 feet, \$2.30; second do., \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

## Window Glass.

TORONTO.

Prices are very firm on this market, but no advance has been made. The demand is very good. We quote: Star first break, at \$3.80 per 100 feet, and Double Diamond, first break, at \$5.06. Discount, 15 and 20 per cent. These prices are shaded on large and well assorted specifications.

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Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1.000) are allowed as one word.

Cash remittance to cover cost **must** accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

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**A** TWO OR THREE good, steady men wanted for general foundry work. Apply Moffat Stove Co., Limited, Weston. f

**A** COMPETENT MAN to take charge of construction of granolithic walks. Apply, with references, and state wages, S. Fournier, Town Clerk, Sudbury, Ont. f

**B** BLACKSMITH'S helper wanted for general shop; one or two years' experience preferred; good wages to good man. Apply W. J. Batten, Port Carling, Muskoka. f

**B** OILERMAKERS—Four first-class men, highest wages paid. John Inglis Co., Limited. f

**P** AINT and varnish traveler wanted by a leading manufacturing house; a thoroughly competent traveler, principally to canvass large consumers. Apply care of **HARDWARE**. Correspondence treated confidentially. Box 168, **HARDWARE AND METAL**, Toronto. (33)

**T** TWO tinsmiths wanted; state wages and experience. Box 80, Goderich. f

**W** ANTED—At once, a tinsmith; state wages. Wm. Ough & Son, Aurora. f

**W** ANTED—Immediately, a first class plumber, with a knowledge of steam and hot water heating, at least six months' work for the right man, Apply Purvis Bros., Sudbury. f

**W** ANTED—Hardware traveler, a young man having five or six years experience in the retail trade preferred. Address giving references to Box 45, **HARDWARE AND METAL**, Montreal. (32)

### FOR SALE.

**H** ARDWARE STOCK—\$3,000—Not \$5 worth dead stock; for sale at 80c. on invoice; can move or continue; established and paying business in good country. Box 163, **HARDWARE AND METAL**, Toronto. (33)

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**H** ARDWARE business wanted in live city or first-class town of not less than five thousand population, located in good farming community. Apply Box 146, **HARDWARE AND METAL**, Toronto. (25tf)

**R** ETAIL hardware business for sale; one of the largest and in best location in Toronto; largely cash business; in good running order; turnover for 1903 over \$35,000; can easily be increased to \$50,000; stock and tools about \$9,000. For particulars and terms address Box 152, **HARDWARE AND METAL**, Toronto, Ont. (28ft)

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**A** FIRST-CLASS SAWMILL for sale cheap; in good condition; in good locality. Apply to Mrs. N. Fulton, Box 50, Fingal, Ont. f



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Please mention HARDWARE AND METAL when writing.



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We work with our agents vigorously in helping forward the sale of **ARK BRAND PAINTS**. We invite inquiries from those who are looking for a thoroughly good and satisfactory paint.



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## Francis-Frost Co.,

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Do you stock the renowned "MURESCO" Wall Finish, if not, write us for full particulars.



# STOVES AND TINWARE

## Furnaces and Fire Protection.

**B**ECAUSE only an occasional fire is heard of in connection with hot air heating systems, usually as the result of poor work in setting the furnaces, while they are sold by tens of thousands every year and countless numbers of these heaters are in use, is no reason why furnaces should be installed without proper care, or that a few simple, inexpensive precautions, such as are suggested below, should not be invariably adopted, that will afford practical assurance of safety from all risk of fire.

Portable hot air furnaces should be set at least 16 inches from any wood work or ceiling, unless they are protected by a metal shield, in which case they may be set not less than 8 inches from wood work or ceiling. Whenever it is necessary to set a portable furnace on a wood floor, the latter should be protected by a course of brick laid in cement mortar, the brickwork extending at least 20 inches in front of the ash pit.

For a distance of 3 feet from the furnace the cold air box should be of metal or brick.

Wooden beams above the furnaces should be protected by IX bright tin, suspended at a distance of 1 inch below the beams and projecting 2 feet beyond the furnace casing all around. The top of the furnace bonnet should be filled in with mineral wool or some other non-conducting material.

Brick set hot air furnaces should have two covers, with an air space of 4 inches between them, the inner cover of the hot air chamber being a brick arch, or two courses of brick laid on galvanized iron or tin and supported by iron bars. The outer cover or top of the furnace should be made of brick or metal supported by iron bars, and constructed so as to be perfectly tight. The walls of brick set furnaces should be built hollow—viz., an inner and an outer wall, each 4 inches thick, properly bonded together, with an air space of not less than 2 inches between them. All brick set furnaces should be set at least 4 inches from any wood work.

Pipes used for the distribution of hot

air from a furnace should be made of bright tin, the joints being double seamed, but not soldered. If not otherwise protected, the pipes should be painted.

Wherever hot air pipes pass through wood or other partitions a double tin sleeve should be used, the wood work being covered by tin or asbestos. Tin is preferable, because mice frequently destroy the protective qualities of asbestos by gnawing it to secure material for nests in which to raise their young.

Horizontal pipes, or leaders, should be kept 6 inches below the floor beams or ceiling, unless plastered or protected by a metal shield, in which case the distance may be reduced to 3 inches. Where hot air pipes pass through studding or any wooden partitions, they should be protected by a double collar of metal with 1-inch air space and holes for ventilation, or be surrounded by 4 inches of brick work.

The leaders should be covered with one thickness of fluted air cell or asbestos covering, the edges overlapping about 1 inch and pasted together, the joints at the end of each section being protected by sheet metal bands.

The sides of the studding and all wood work adjoining the stacks should be protected from the effect of heat by tin and asbestos, the space between the studding being spanned by expanded metal lath, securely nailed in place. Stacks in inside partitions should be covered with asbestos and 1-inch hair felt, wired in place. All stacks should be covered with one or two thicknesses of asbestos paper pasted on with silicate of soda.

Ample fire protection may also be secured by using stacks having double walls inclosing an air space that serves to prevent undue escape of heat to the adjoining wood work. Small openings into this air space at the top and bottom of the stack permit a current of air to flow through the air space and thereby keep the outer wall of the pipe cool enough to prevent the ignition of shavings or other inflammable material that may come in contact with the pipe.

Register boxes should be made of tin, with a flange on top to fit in the rabbit

in the border, and the register should rest on the tin flange. There should be an open space of not less than one inch on all sides of a box. When but one register is connected to a furnace the register should have no valves.

Registers directly over a brick set furnace should be supported by a brick shaft from the cover of the furnace, with a metal pipe inside. Registers placed in any wood floor should have either iron or stone borders.—Metal Worker.

## Notes on Stoves and Draft.

**N**o stove nor range in itself can produce a draft. That is done by the chimney. The taller the chimney the stronger is the draft.

A stove can no more operate without a chimney than a steam engine without a boiler.

A dealer should always know the character and condition of the chimney before he puts up the stove. The good operation of the stove depends directly upon the ability, of the chimney to produce a draft.

The merchant often forgets that the things that prevent the stove from working are located often between the pipe collar of the stove and the top of the chimney.

It is absurd for a man who can see the chimney and the stove set up, to write to the manufacturer, who can see neither, and ask him why the stove will not draw.

## Fall Stove Trade.

**T**HE busy stove season is fast approaching, and soon the stove dealer will be receiving numerous inquiries for stoves and ranges. Is he ready to meet these inquiries? Nowadays, if a stove dealer wishes to make the greatest success of his business, he must be up-to-date, as is so in all other lines of business. He must be in a position to meet many varied demands and fancies. His customer has heard through some source—and such sources are numerous—of some stove with new and special features. The customer wants to get that stove and asks the dealer about it. Now, it's part of the dealer's business to know of that stove.





**IRON  
ROOF  
CRESTING  
AND  
FINIALS.**

Large variety.  
Modern designs  
Low prices  
to Hardware  
dealers.

**Dennis Wire & Iron Co.**  
Send for New Catalogue. **LONDON, Ont.**



A FULL LINE OF

## Wire Springs

FOR THE

Carriage and Furniture Trade

**JAS. STEELE, Guelph, Ont.**

A SAMPLE ORDER SOLICITED



# Corundum <sup>FOR</sup> Polishing

## OPINIONS OF USERS:

Factory "G," International Silver Co., Norwich, Conn., says:

"We find it will do just double the work that any emery we ever had would do. Wheels that have lasted us from ten to twelve days with emery are now lasting us from twenty-four to twenty-six with corundum. Besides the saving in time, the work itself is very much more satisfactory."

We are pleased to supply samples for testing purposes.

**The Canada Corundum Company, Limited**  
**TORONTO, CANADA.**

# Grand Idea

**The Range that never fails.**

Don't take chances and sell your customer a poor range.

Every doubtful range you sell will surely "come home to roost."

When you sell a **Grand Idea** Range, it stays sold.

Every **Grand Idea** Range you sell sells others of the same make.

The **Grand Idea** Agency is a good thing for you to have.

**Wise Dealers** are now placing orders for **Grand Idea** Ranges and receiving the agency for their district.

**Descriptive Pamphlet** forwarded upon request.

**GUELPH  
FOUNDRY CO.**

LIMITED

**GUELPH, ONT.**



Manufacturers of **RANGES, STOVES, HEATERS, and FURNACES**

Western Representative: **MESSRS. E. G. LOW & CO., Winnipeg, Man.**



**WORK AND PRICES RIGHT**

**GALVANIZING**

ONT. WIND ENGINE & PUMP CO. LIMITED.  
TORONTO, ONT.

Order a stock of

## "Windmill Best" Galvanized Sheets

Cut Prices Made by Quality Right

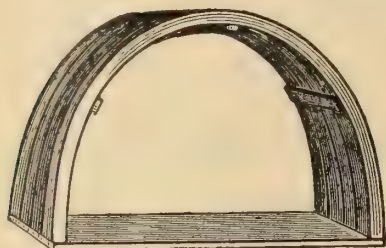
**John Summers & Sons, Ltd.**  
STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.  
Canadian Agent,

**F. HANKIN, - Montreal**

J. S. LOUGHEAD.

F. J. LOUGHEAD, Manager



### The Sarnia, Ontario, Hub, Spoke and Bent Goods Factory.

The proprietors would respectfully call attention of those interested to the fact that through the enlargement of their plant they are prepared to fill any orders entrusted to them at short notice, as their stock of material on hand and constantly arriving is the largest they have had for years. Terms reasonable and quality guaranteed.

A trial order is respectfully requested. Special attention is called to Oak Wheel Rims and Spokes, also Sleigh Runners in Hickory and Oak, from 1 inch to 4 inch shoe.

ADDRESS, -

**J. S. LOUGHEAD & SON, Sarnia, Ont.**

## MODERN MAGIC!



No more matches required to light the gas.  
The "IGNITO" Mantle Lights when the gas is turned on.  
Write for booklet and samples.

The International Gas Appliance Co., Limited  
164 BAYS TREET, TORONTO, Canada

Perhaps he may not be able to keep it in stock because the different kinds of stoves on the market are almost numberless. However, the catalogues of stove founders should be handy for reference, where he can show his customer an illustration of the stove and also descriptive points about it. He should be in a position to quote prices, and thus might close an order for the stove without having to stock it. It would be comparatively easy to write or wire to the manufacturer to have that particular stove forwarded at once.

To keep much of a stock of stoves on hand requires an immense space. It is almost impossible for a stove dealer to carry more than a sample line of stoves, and even the samples have to be limited to the ones the dealer thinks there will be the most demand for. Then catalogues have to be made to serve instead of samples for any inquiry outside of the lines carried.

Tastes differ as much in the stove line as in any other, and the stove dealers will probably have their hands full this year meeting all demands as they have had in years past. Most customers having once got an idea cling to it, and refuse to be satisfied with anything less or more than that comprised in their idea. Thus the courtesy and good humor of the dealer will often be taxed to the breaking point. However, the customer must not see it, and everything must be done to fill the idea the customer has. The dealer must look at the conditions from a logical standpoint, and be able to meet them in a logical way.

### Directions for Operating Stoves.

To secure good operation in stoves and ranges, see:

- 1st., that the flue door is closed tightly.
- 2nd., that the chimney is clear and has a good draft at the pipe hole
- 3rd., that the pipe fits closely on the pipe collar of stove or range, also where it enters the chimney.
- 4th., that the pipe does not enter too far into the chimney.
- 5th., that there are no other pipe holes open on either side of the chimney either above or below.
- 6th., after having all these parts properly adjusted, open the direct draft damper. If you fail to get a good fire, look for the trouble in the flue.
- 7th., if the stove or range has a reservoir attachment, be sure the reservoir damper is turned so as to throw heat around the oven when desiring to operate the oven.

### RUSSIA'S FOREIGN TRADE.

RUSSIA'S foreign trade in 1903 across her European borders amounted to \$309,770,000 in imports and \$489,131,850 for goods exported. The following are the principal participants in that trade:

|                         | Exports.      | Imports.      |
|-------------------------|---------------|---------------|
| Germany . . .           | \$119,686,000 | \$121,385,500 |
| Great Britain           | 112,270,000   | 57,680,000    |
| France . . . . .        | 39,088,500    | 14,471,500    |
| Austria . . . . .       |               |               |
| Hungary . . . . .       | 19,055,000    | 117,368,500   |
| Holland . . . . .       | 52,015,000    | .....         |
| Belgium . . . . .       | 22,402,500    | .....         |
| Italy . . . . .         | 29,200,500    | .....         |
| United States . . . . . | 2,729,500     | 32,239,000    |

It is estimated that of the Russian exports to Holland and Belgium (consisting principally of grain) \$33,990,000 worth were reshipped thence to Germany. Russia's imports from the United States in 1902 were valued at only \$19,776,000. The great increase for 1903 is owing to larger importation of cotton and the enhanced cost of the same, as also to the increased imports of agricultural implements and machines from the United States. The 1903 importation of Russia exceeds that of 1902 by \$38,316,000 in value, which has its cause in Russia's favorable crop in 1902. The largest increase among the imports is that of agricultural machines and implements, figuring \$13,029,500 value, against but \$9,573,000 for the year before. In all other machines of iron and steel Russia's importation for 1903 shows a decline amounting to about 25 per cent. as compared with the average of the three preceding years. Of Russian exports showing large gains for 1903 as compared with 1902 are to be noted wheat and rye, butter and eggs, white soft sugar, naphtha, timber and lumber and iron ore. More than half of Russia's total exports consists (in point of money value) of grain, the exports of the latter (including flour and bran) amounting to \$246,005,500. Butter exported amounted to \$16,274,060, and eggs to \$26,265,000. Last year Russia shipped abroad nearly three times the quantity of white soft sugar exported during the previous year.

The hardware store and stock of H. R. Manders & Co., Poulett street, Owen Sound, was damaged by fire recently.





Tell your Friends About It

P-H  **PIPE THAT IS PIPE**  P-H

Wrought Merchant Pipe

Black and Galvanized

**PAGE-HERSEY IRON AND TUBE CO., GUELPH**  
**., LIMITED, CANADA**

**NOT IN THE COMBINE**

Ask for Prices of  
**Shovels, Spades, Scoops, Etc.**

*WE HAVE A LARGE STOCK.*

**CANADA HARDWARE CO., Limited, Montreal**

**Seasonable Goods**

**Colonial Enamelled Preserving Kettles**

All Sizes in Stock. From 2 to 30 quarts.



**Fruit Funnels and Ladels.**

In Tin and Enamel Ware.



**Hem's Fruit Presses  
and Wire Fruit Strainers.**

Prompt Shipment Guaranteed.

**The THOS. DAVIDSON MFG. CO. Limited. . . . MONTREAL.**



# HEATING AND PLUMBING

## THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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Vice-President—Wm. Smith.  
Secretary-Treasurer—E. H. Russell.

## THE PLUMBING SUPPLIES MARKET.

Office of HARDWARE AND METAL,  
232 McGill Street,  
Montreal, August 13, 1904.

### Quebec.

"KEEPING up well" is the way a representative dealer described the condition of business in plumbing goods and supplies. The early quietness probably accounts for this, as there is no doubt that in spite of the usual falling off in business, due to the

holiday season, an active business in these lines is still being done. Iron pipe is stronger and the demand is especially good. Large orders are being booked for the heating season. Lead pipe, and soil pipe and fittings continue active. Prices throughout remain unchanged, but an advance is expected in iron pipe.

**Lead Pipe**—A fairly good business in lead pipe. Prices are firm at our former quotations. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f. o. b. Montreal, Toronto, St. John, N. B., and Halifax; f. o. b. London, 15c per 100 lbs. extra; f. o. b. Hamilton, 10c per 100 lbs. extra.

**Soil Pipe and Fittings**—The market continues bright, with no change whatever in prices. We quote as follows: Light soil pipe, 3 to 6 inches, 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

**Iron Pipe and Fittings**—The market is stronger and the demand especially good. Large orders are being booked for the heating season. While the price remains the same, stiffer prices are expected in the near future. Prices are quoted on application, as the real conditions cannot be arrived at. Subject to concessions, we quote nominal prices as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

**Solder**—There is no noted change in the price of solder this week. Bar solder is quoted at 17 1-2c, and wire at 18c.

**Soldering Irons**—Prices are as follows: 1 to 1 1-2 lbs., per lb., 37c; 2 lbs. and over, 34c.

### Ontario.

Office of HARDWARE AND METAL,  
10 Front Street East.  
Toronto, Aug 12, 1904.

DURING the last three weeks there has been a perceptible dullness on this market. This is specially noted at outside points, but is also noticeable in the city. At the present time many of the plumbers are away holidaying, and this is probably a reason for the quiet market. Quotations remain unchanged since last week.

**Lead Pipe**—Business is fair, although there has been a noticeable quietness during the last few weeks. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

**Soil Pipe and Fittings**—Trade is very fair. Prices are easy, but there is no change in quotations since last week. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

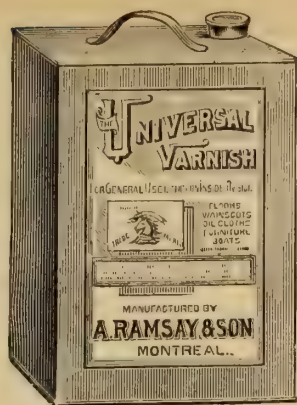
**Iron Pipe and Fittings**—Prices are not likely to reach a lower ebb than that here quoted. A very good business is being done at the low prices. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1-2 to 70 per cent.

**Copper Range Boilers**—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

**Iron Pipe**—Prices are unchanged. Competition is not now quite so keen. Prices here quoted are thought to be bottom prices. Our quotations are f. o. b. Toronto as follows: Black pipe, 1-8 in., \$1.85 to \$1.95; 1-4 in., \$1.90 to \$2.05; 3-8 in., \$2 to \$2.25; 1-2 in., \$2.25 to \$2.35; 3-4 in., \$2.85 to \$3; 1 in., \$4 to \$4.25; 1 1-4 in., \$5.75 to \$6; 1 1-2 in., \$7 to \$7.25; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.65 to \$2.80; 3-8 in., \$2.80 to \$3; 1-2 in., \$3.15 to \$3.25; 3-4 in., \$4 to \$4.10; 1 in., \$5.90 to \$6; 1 1-4 in., \$8.25 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

**Enamelled Ware**—Prices are firm, and an active trade is being done. We quote: "Standard," 5 1-2 feet, 2 1-2 in. rolled rim, first quality, at \$21.60; second quality \$16.35.





## Two Winners

These two lines are for your varnish trade, made for varnish business; to please the public and the user generally.

**The Universal** is a regular "king" among varnishes with an interesting rebate voucher attached to each can, paid by us on presentation. Ask for our booklet.

**The Kaurine** is consort to the Universal. It's a happy winner. Specially recommended for interior work.

All in handsome cans, fully guaranteed and yielding a good profit.

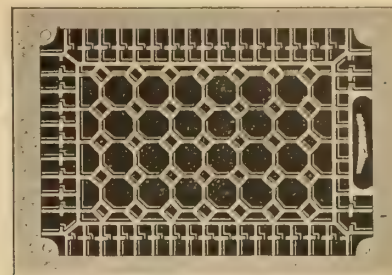
**A. RAMSAY & SON  
MONTREAL**

EST'D  
1842

**VARNISH  
MAKERS**



## "REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

## THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

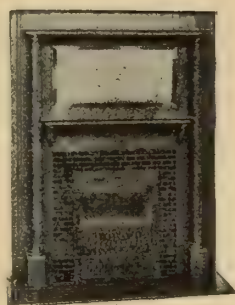
TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.

Have you  
tried it?

Tried what?

**SELLING  
MANTELS.**



This is in your line of business, and it will pay you.

**The Batty Stove & Hardware Co**

76 YORK ST., TORONTO.

**A PERMANENT  
and Handsome Roof.**



## Arrow Brand Asphalt Ready Roofing.

Will bring you profitable trade and satisfied customers. Comes in rolls ready to lay, all ready covered with gravel. Requires no experience to lay, and lasts for years without further attention.

**A. C. JENKING, Sole Agent,**  
Room 215 Coristine Building, - **MONTREAL.**  
Sole agents being appointed in each district. Write to-day.

When in want of

**Hayfork Pulleys,  
Barn Door Hangers,  
Jack Screws,**

**Mrs. Potts Irons,  
Diamond Dampers,  
Etc.**

Order from

**The H. R. Ives Co., Ltd., - Montreal**

## WE WANT WORK

**Old Stove Parts Re nickeled  
Like New.**

Put your Stove parts in a box and send to us. We do the rest.  
Good as the best. Cheap as the cheapest.

Long Distance Phone, Main 2993.

**FAIRGRIEVE MFG. CO.,  
TORONTO.**

## Plastic Stove Lining

Ready for use. Easily applied with a trowel or the hands. Better than the old style of firebrick. Costs less. Fits any stove. Won't burn out. Clinkers won't adhere to it.

Send for Circular and Price List.

MADE ONLY BY

**G. F. STERNE & SON, Brantford, Ont.**



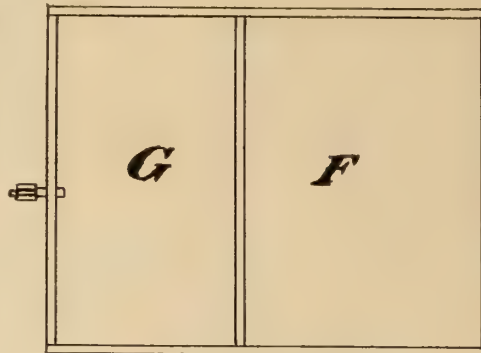


## A Water Filter.

**E**DITOR of Hardware and Metal:— Noticing in last week's issue of Hardware and Metal a letter from N. A. asking for practical information as to the best method of filtering rain water from one tank to another, I would submit the accompanying plan and section of a filtering system, hoping that it may prove of some help to him.

The illustrations show fairly well the design of the filter. There is one tank divided off into two departments, F and G. This partition extends to within an inch of the floor of the tank. It is required to filter the rain water from department F to department G, the rain water from the roof being led into F. On the floor of G some fairly large pebbles are deposited, they being large enough to hold their position and not pass under the partition into department F should a back flow of water occur at any time. On top of this some clean gravel is placed. On top of that again a quantity of sand which has been thoroughly washed is placed. Then a little more gravel and pebbles is spread over the surface. D represents the stones and gravel in the bottom, C the sand, and B the gravel and stones on top. As is shown, the bottom of the tank slopes towards the back, or towards E. The purpose of this is to al-

can be obtained as long as the level of the water in F is not below the level of the tap. If it is thought that the level of the water may fall below that of the tap, the quantity of the filter may be lessened and the tap lowered. However, the lowering of the tap thus would per-



Plan of Filter Tank.

haps be at the expense of the efficiency of the filter, as can be readily understood.

There is another way of making the most of the water on hand. The deeper the tank for the area of its cross-section the higher the level for the same amount of water. By increasing the height and decreasing the cross-section the capacity of the tank need not be altered, nor need the depth of the filter be decreased to make use of an extra amount of water.

It is clearly understood that water entering F will force its way up through the pebbles, gravel and sand until the water reaches same level in G as in F.

N. A. proposes to place his tanks in the cellar. Does he think this is good policy? The presence of water in the cellar would be liable to make the house damp. Water vapor would be continually given off, which would penetrate to the first floor of the house at least. Besides the water would be liable to absorb the organic and ammoniacal exhalations connected with the presence of life. A better place would be in some shed, or even out of doors, with a suitable cover to protect the tanks and water.

J. C. A.

## A Welcome Home.

**M**R. ROBERT ROSS, president of the National Association of Master Plumbers and Steam and Hot-Water Fitters of Canada, and also president of the Toronto Association, who has been paying a visit to his old home in Scotland, returned home Saturday, August 6.

The members of the association could not let the event pass without doing something to extend to their genial and

efficient president a warm welcome home.

On Monday night a business session was held in their rooms, which were gaily decorated. After all business was transacted an adjournment was made to Williams' Parlors on Yonge street, where a repast had been prepared in honor of the president's return. Full justice was done to the good things provided. The toast to "The King," proposed by Mr. Geo. Cooper, vice-president, who presided, was done full honor. The toast to "Our President" was received with the greatest enthusiasm.

In replying Mr. Ross thanked the members for the warm manner in which the toast had been received. He also took that opportunity of expressing his appreciation of the honor that had been conferred upon him by the National Association in electing him president during his absence in Scotland. He assured the assemblage that his aim in the larger field would be to elevate the craft, as had ever been his endeavor in the local association.

During the evening Mr. K. J. Allison, who has also recently returned from a trip to Scotland, spoke, as did also Mr. W. H. Meredith, secretary of the Ontario Provincial Association.

The enjoyment of the evening was enhanced by songs and piano selections by Messrs. W. W. McKendry, W. J. Street and J. Fullerton.

## Building Permits.

## TORONTO.

T. Robinson, dwelling on Westmoreland avenue, \$1,400.

I. Wardell, alterations to store, 450 Spadina avenue, \$1,000.

Toronto Pharmacal Co., warehouse on King street west, \$13,000.

The Gutta Percha & Rubber Co., alterations to office buildings, Yonge and Wellington streets, \$7,500.

## MONTREAL.

Jos. Sunard, Gain street, one dwelling, \$2,000.

Henry Montcalm, Aylwin street, one dwelling, \$2,500.

Chas. Fletcher, St. James street, one warehouse, \$10,000.

C. O'Brien, 75 Aylmer street, alterations on house, \$1,500.

Union Card & Paper Co., Parthenais street, one factory, \$16,000.

E. Macresse, Christopher Colombe street, one dwelling, \$1,700.

Mrs. E. Ghysens, Christopher Colombe street, one dwelling, \$1,600.

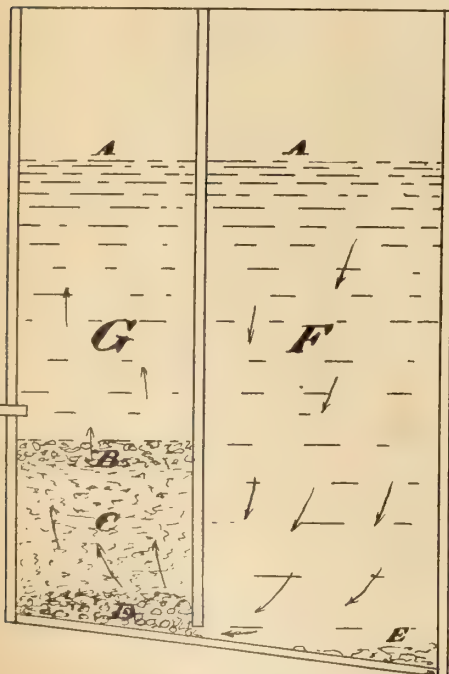
J. A. Richard, Ontario and Aylwin streets, one dwelling, \$6,000.

Jos. Fortier, 1,792 Notre Dame street, alterations on one store, \$5,600.

L. A. Lapointe, 377 Notre Dame street, alteration on dwelling, \$1,000.

A. D. Quentin, 1,150 Ontario street, alteration on store and dwelling, \$1,000.

Rev. Sisters of the Con. Notre Dame, Sanguinet and Ontario streets, one educational institution, \$6,000.



Section of Filter Tank

low large and heavy foreign matter in the water, which is not affected by the slight current through the filter, to be deposited and thus prevent the clogging of the space between the two departments, which might otherwise occur.

A represents the water level. Now it can be readily seen that filtered water



CHARLES BAYNES, England.  
 MAKER OF THE KNUZDEN BROOK, BLACKBURN,  
**"CLICK-CLACK"**  
 HACK SAW BLADES.  
 In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited  
 HANOVER, ONTARIO.

Manufacturers of **"Saugeen Brand"**  
 the Celebrated **OF PORTLAND CEMENT.**

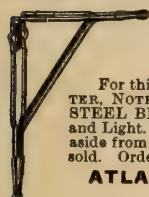
Prices on application.

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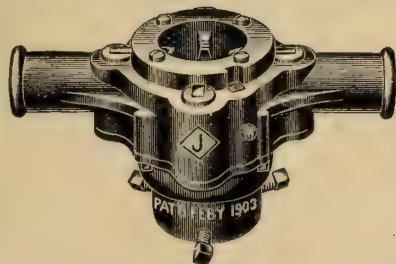
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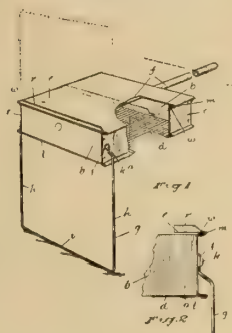
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# INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

**W.** H. MOORE, secretary of the Canadian Northern Railway, says that contracts have been awarded for the Toronto-Parry Sound section of the line to Sudbury and that it is the intention of the company to rush operations during the season. Near Rose Point connections already exist with the C. A. R.

James Warnock & Co., manufacturers of axes, edge tools, carriage springs and carriage gears, Galt, Ont., have a large and varied stock of tools and axes and are in a position to supply the trade promptly. The well known high grade finish and quality secures for them a large share of the business of Canada in these lines.

The Dunlop Tire Co. have filed a petition to wind up the Ewart Carriage and Wagon Works, Toronto. The company's capital stock is \$100,000, a thousand share of \$100 each. Of these 294 are, according to the petition, said to be subscribed, and 133 paid up. The petitioners have a judgment against the company of \$200 including costs.

The cement plant at Belleville is making wonderful progress in construction. The steel frame work of all the large buildings is now erected. The 600 horse-power Reynolds Corliss tandem compound condensing engine has been installed. This engine will be directly connected to the raw grinding mills. In addition to this engine a 750 horse-power turbo-generator will be installed, the power from which will be utilized throughout the plant. A 200 horse-power engine will be installed as a reserve power.

The total production of minerals in British Columbia for the first six months of this year is as follows: Gold, 123,339 ounces; silver 2,037,061 ounces; copper 17,513,886 lbs.; lead 16,500,000 lbs. These figures show an increase over the production of former years, especially in the case of silver lead ores. Moreover the production of the last six months of

this year will be considerably in excess of the first six months, as the amalgamation of large concerns in the Boundary district and the installment of several concentrating plants in Rossland, insure an important increase in the production of silver lead and low grade ore values.

That quality counts is evident in the fact of the rapid growth of the three large factories where are manufactured Boeckh's standard brushes and brooms, Bryan's London brushes and Cane's Newmarket pails, tubs, washboards and clothes pins, which have for the last half century been turning out manufactures of a set standard which has gained for them an enviable reputation. It has become generally known among the trade that goods bearing their trade marks "are business bringers of intrinsic worth, being quick selling lines which afford a good margin of profit." They are "Made in Canada" goods and are of the reliable kind that help to make this phrase a guarantee of good value.

Returns made to the United States Geological Survey shows that the United States has again exceeded all previous records in the production of coal. The forthcoming report on the country's coal production will show that the total output of the coal mines of the country in 1903 amounted to 359,421,311 short tons. This is an increase of 57,830,872 short tons, or 19 per cent. over the production of 1902, which amounted to 301,590,439 tons. The production of 1903 was nearly double that of 1893, and more than three times the output of 1883. The increase of production in 1903 over 1902 was equal to the total production of all kinds of coal in 1878, only twenty-five years ago.

## NOTES.

The sawmill of H. Sloan, Tilbury, Ont., has been destroyed by fire.

The shop of William Kelchon, manufacturer of gas engines, Kingston, has been destroyed by fire.

It is reported that natural gas has been struck in the vicinity of Sheep Creek, 21 miles south of Calgary.

The Cape Breton Coal and Iron Co. have sold their properties at Cacherones Lake, Cape Breton, to an English corporation, who, it is said, will at once proceed to operate them.

A despatch from London, Eng., says that the Board of Trade returns for July shows a decrease in imports of \$23,483,500, principally in food stuffs, \$18,284,445, and wool \$3,345,265, and a decrease in exports of \$5,460,000, mainly in iron, steel, and manufactures thereof.

The employees of the MacDonald Engineering Co., Fort William, are out on strike, and it is feared that a sympathetic strike may occur among the union iron workers in Fort William. A general strike would retard the construction of all elevators and mills now in course of construction.

The New York subway has been completed in all its details. The contractor was J. B. McDonald and the contract price \$35,000,000. A few weeks will be spent in running experimental trains, and on September 1 the rapid transit system will be opened to the teeming millions of New York.

## COMPANIES INCORPORATED.

McWilliam & Maguire, Limited, Toronto; capital, \$25,000; purpose to carry on a general brokerage and securities business. The directors are: W. Y. Martin, T. J. Maguire, and F. Reilly, all of Toronto.

Gerhard Heintzman, Limited, Toronto, capital \$350,000; purpose, to take over the business of Gerhard Heintzman & Co. The directors are: Gerhard Heintzman, A. N. Heintzman and K. A. Heintzman, all of Toronto.

The Power City Land Co., Limited, Niagara Falls, Ont., capital, \$10,000; purpose, to carry on the business of a land company. The directors are: J. E. Ward, R. B. Brown, and T. E. Emery, all of Niagara Falls.

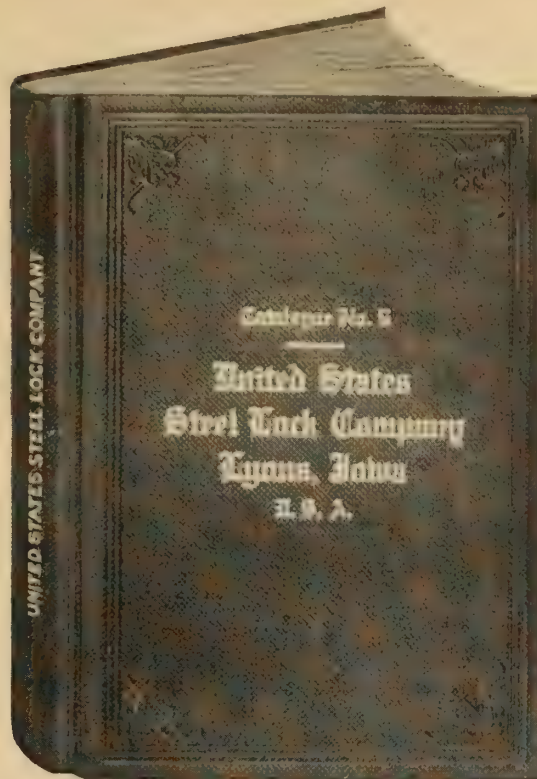
The Northern Manufacturing Co., Limited, Windsor, Ont., capital \$40,000; purpose to manufacture and deal in machinery, tools, engines and farm implements. The directors are: F. H. Macpherson, Windsor; J. T. Nichols and I. W. Durfee, both of Detroit.

The Alberta Central Land Corporation, Limited, Toronto; capital \$750,000; purpose, to carry on the business of a





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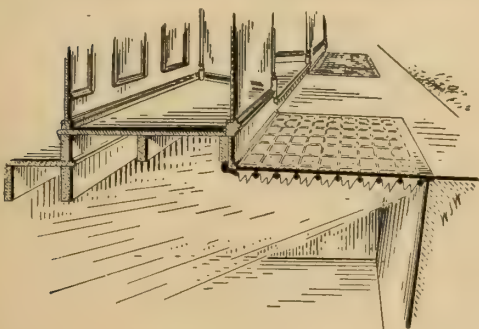
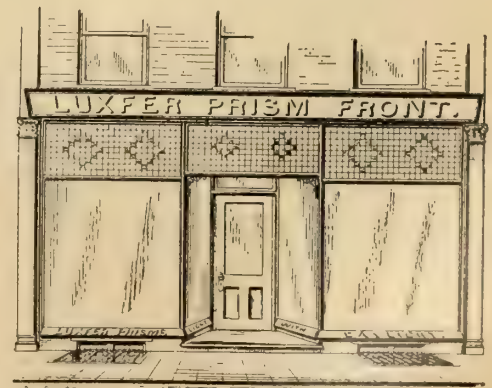
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The Windsor Pump and Foundry Co., Limited, Windsor; capital \$40,000; purpose to carry on a general foundry business and to manufacture and deal in machinery, farm implements, etc. The directors are: U. Beneteau, Geo. B. McLeod, A. L. Thibodeau, all of Windsor.

The Grand Valley Peat Products, Limited, Toronto, capital, \$200,000; purpose, to carry on in all its branches the operations of a mining, milling, reduction and development company. The directors are: J. C. Steele, W. D. Eerngey and W. H. Jackson, all of Toronto.

The British Columbia Process Co., Limited, Toronto; capital \$500,000; purpose to carry on in all its branches the operations of a mining, milling, reduction and development company. The directors are: A. B. Cook, G. E. Kingsley, R. M. Melville, C. P. Green, all of Toronto; C. B. Taylor, New. Liskeard, Ont.

Imperial Export Co., Limited, Toronto, capital \$100,000; purpose, to carry on business as merchants, importers, exporters, forwarders, warehousemen, and to act as commission and customs brokers. The directors are: W. H. Kimpton, J. P. MacGregor, E. B. Ryckman, C. W. Kerr and C. S. MacInnis, all of Toronto.

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By Henry C. Hammack.

**B**EING assistant to the president and general manager of the Lima Locomotive & Machine Company, Lima, Ohio, who also has charge of the sales department, I found it necessary to devise a scheme to follow up our inquiries from prospective customers for locomotives. I started a system three years ago, at first in a rude manner, yet it answered the purpose and brought the desired result, and since then I have improved on it as opportunities presented themselves.

We have two card index boxes of about 1,200 cards capacity each. In these boxes the principal cards are carried. In one box we have an eighty-division alphabetical index, and in the other box two sets of monthly and daily guides. Now, when we receive an inquiry two cards are filled out; one is filed in alphabetical index under proper letter; the other card is filed ahead in monthly and daily guides, 15 days from date inquiry is answered.

This is the beginning of the usefulness of the "Follow Up" system. In our business, as well as in other classes of business of similar nature, it often becomes necessary to know whether we have ever quoted a certain party without wasting so much time as would be required in order to go through correspondence in letter files, and the card filed in the alphabetical index will at once be found useful for this purpose. You can turn to these cards and find this information in one-fifth the time required to look up correspondence.

These cards also serve another purpose: Throughout the different parts of the country there are a great many commission houses and houses that buy and sell second-hand locomotives. These parties frequently write for prices for customers, asking that we quote price reserving them a dealer's commission. Our rule is to allow no one a commission on sales to customers whom we are already in correspondence with or old customers whom we have sold to before. As soon as we have inquiries from these commission or second-hand houses, we can tell at once by turning to the cards in alphabetical index whether we are in correspondence with parties mentioned or whether we have made prices to them. This is also a saving of time, probably money, in case letters should be misplaced in file by some error and could not be found at time of looking up correspondence. There have been times when we had to rely on correspondence entirely.

The cards carried in the other box are filed ahead 15 days from date of answering inquiry; after the 15 days' time has elapsed, the card is taken out and we go over the correspondence in letter files to see if we have heard from parties in the meantime, and if not a "call up" letter is written them. Then the card is filed ahead another fifteen days.

If no response is received to our first "call up" letter, a second letter is written; if no response, then a third

letter is written and so on until four letters have been written. Mostly some sort of a reply is received to our first letter. If the reply is favorable, we file the card ahead 10 or 15 days for consideration. It may be that before the first 15 days rolls by we have the matter in such shape that a sale is about to be effected.

If we receive favorable inquiries from a section of country where one of our salesmen is traveling, correspondence is at once forwarded to him for further attention. Or if it happens that a number of inquiries are received from one section of the country, then a salesman is sent out to look after same. In case orders are received from parties making inquiries, cards are taken out of index box containing monthly and daily guides (which we call "running cards") and marked across face, "Sold a certain weight locomotive," whatever it may be, then filed away in alphabetical index in other box, taking out the card originally placed in alphabetical index and destroying same.

In case it is desired to file card away containing inquiry which is received from parties from whom we cannot get any response, or parties not being in the market or purchasing elsewhere, the card is taken out of the index box containing "running cards," and marked across face, "cannot get any response," "are not in the market, made other arrangements," "purchased second-hand locomotive," "purchased new locomotive elsewhere," whichever the case may be. These cards are filed away in alphabetical index (taking out original cards and destroying same) until the end of the year and then filed away in transfer case for future reference.

This system having been in use only three years, has saved the company many thousands of dollars. I can recall one instance where the fact of this system being in use brought about a sale of a locomotive which sale alone amounted to \$7,000. It was this way: We answered an inquiry received from a prospective customer quoting on an engine. We made out cards as usual and filed them away in the proper way. When the 15 days rolled by the card was taken out of the "running cards" and correspondence looked up, but we found we had received no response. We at once wrote them a "call up" letter and it developed that our first letter quoting price had never been received by customer. As soon as he received the call up letter he wired us, stating that letter making price had never been received by him, and asked for a duplicate. The duplicate letter was received O. K., and after considering our proposition wired us his order. Afterward, in writing us, explaining the matter, he stated that he supposed, as we did not answer his letter, we did not care to make him a price and he had decided to order elsewhere. This simply shows the benefit of the system in one instance.

This system enables us at all times to have our prospective customers, also customers whom we have sold and parties whom we were unable to effect a sale to, at our finger ends, which is quite a benefit to any sales department.

A system along this line could be applied to most any kind of business, and parties who have not yet got out of the "rut of the old way" will do well to establish it. I am quite certain that good results would be forthcoming inside of three months after system was established.



**ADVERTISE YOUR BUSINESS**

Write for particulars about our cuts and ads. from 50 cents up. To advertise in newspapers. Catchy ideas to catch business. Given to one merchant in a town. Send us your ads. and we will criticise them free. WRITE TO-DAY.

**GEO. J. SMITH BUREAU, 621 BROADWAY, N.Y.**

WE WRITE ADS. IN FRENCH.

**TORONTO'S QUICK AND SURE PRINTERS**

We do all kinds of good printing cheap. Let us handle your next order and you will be satisfied. Latest styles in Type and Borders. Everything up to date.

1,000 LINEN LETTERHEADS THIS MONTH, \$2.50.

**G. A. Weese & Son, 44 Yonge St., Toronto.**

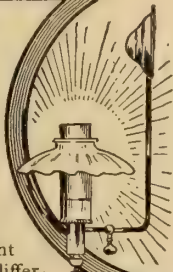
**THE AUER GAS LAMP**

Delightful to read by.

**Gives the Light of 100  
Candles and Costs Less  
Than Coal Oil.**

No smoke or smell. The whitest, clearest, softest light for reading or sewing. The different styles are suitable for store, church or home. **SATISFACTION GUARANTEED.** Catalog on Request.

**AUER LIGHT CO., MONTREAL.**

**NEW TELEPHONE LINE**

A new copper metallic line has just been completed from Simcoe to Port Rowan. The towns listed below can now be reached from Toronto at the following rates:

|                     |     |             |
|---------------------|-----|-------------|
| <b>PORT ROWAN</b>   | - - | <b>50c.</b> |
| <b>ST. WILLIAMS</b> | - - | <b>50c.</b> |
| <b>VITTORIA</b>     | - - | <b>40c.</b> |

**The Bell Telephone Co. of Canada**

# Turn Away

From the old style of book-keeping. You are losing money daily and you know it.

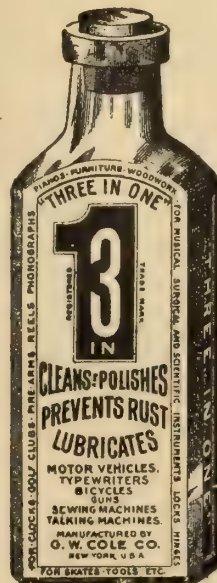
Why not adopt a system by means of which you can know positively that you have sent out every account correctly? Simplest form yet invented. Any one can be a book-keeper.

Write for Catalogue.

**The Briggs Ledger System Co.,  
Limited**

**75 York St., - Toronto, Can.**

# 3 in One



Oilright for delicate mechanism, guns, bicycles, etc. "3 in 1" is the ideal lubricant for all oiling purposes. Will not gum, thicken, turn rancid or collect dust. Cleans and polishes and positively prevents rust on metal surfaces in any climate or in any kind of weather, better than furniture polish for veneered and varnished surfaces. Sold by all the leading jobbers in Canada.

**G. W. COLE CO.**

**141 Washington Life Bldg., New York.**

RETURNED

AUG 19 1904

At 100  
Page 52  
over

**A DISTINCT  
TYPE**

The **OLIVER** has certain superior features and unique improvements exclusively its own.

The

**OLIVER**

Typewriter

The Standard **VISIBLE** Writer.

Operates as smoothly as the delicate mechanism of a watch, durability unquestioned.

*Works in a Whisper*

Art Catalogue Free.

**THE CANADIAN OLIVER  
TYPEWRITER CO.**

183a St. James St.  
**MONTREAL.**

Agents wanted in all unoccupied territory.

Write for our Great Special Offer.

CABLE FROM LONDON.

London, May 27, 1904.

British Government to-day ordered fifty more Oliver Typewriters.


LONDON.



# ALEX. McARTHUR & CO., LIMITED

82 MCGILL STREET, MONTREAL

Hardware Dealers should know that the **QUALITY** of our

Ready Roofing, Sheathing and Black  Diamond Tarred Felts,  
Building Papers, Fibre and Manilla Wrappings, etc.,  
is of **THE BEST.**

Made at our own Mills and Factory.

Send for Quotations.

**FELT FACTORY**

Harbour and Logan Sts., MONTREAL

**PAPER MILLS**

JOLLIETTE, QUE.

## CURRENT MARKET QUOTATIONS.

Aug. 12, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

### METALS.

**TIN.**  
Lamb and Flag and Straits—  
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

**TIN PLATES.**  
Charcoal Plates—Bright.  
A.L.S., equal to Bradley— Per box.  
I.C. usual sizes. \$6 50  
I.X. " " 8 00  
I.X.X. " " 9 50  
Famous, equal to Bradley—  
I.C. " " 6 75  
I.X. " " 8 25  
I.X.X. " " 9 75

Raven and Vulture Grades—  
I.C. usual sizes 4 25  
I.X. " " 5 00  
I.X.X. " " 5 75  
I.X.X.X. " " 6 50

"Dominion Crown Best"—Double  
Coated, Tinned. Per box.  
I.C. " " 5 50  
I.X. " " 6 50  
I.X.X. " " 7 50  
Allaway's Best—Standard Quality.  
I.C. " " 4 50  
I.X. " " 5 50  
I.X.X. " " 6 50

Coke Plates—Bright.  
Bessemer Steel—  
I.C., usual size, 14x20 3 35  
I.C., special sizes, base 3 60  
20x28 7 10

Charcoal Plates—Terne  
Dean or J. G. Grade—  
I.C., 20x28, 112 sheets 7 50  
I.X., Terne Tin 10 50

Charcoal Tin Boiler Plates.  
Cookley Grade—  
X.X., 14x56, 50 sheet box. } 7 00  
" 14x60, " }  
" 14x65, " }

Tinned Sheets.  
72x30 up to 24 gauge. 7 25 7 50  
" 26 " 7 75 8 00

**IRON AND STEEL.**  
Common bar, per 100 lb. 1 80  
Refined " 2 20  
Horseshoe Iron " 2 25  
Hoop steel, 1 1/2 to 3-in. base 2 75  
Sleigh shoe steel, 2 10  
Tire steel 2 30  
T. Firth & Co.'s tool steel, per lb 0 12 1/2  
B. K. Morton & Co.—  
" Alpha " tool steel. 0 70  
" M " Self-Hardening. 0 60  
" J " Standard. 0 14  
" I " High speed steel. 0 60  
" standard tool steel. 0 14  
" crucible sheet steel. 0 14  
" Chas. Leonard's tool. 0 08 0 09

Crucible Steel Co.  
" Black Diamond. 0 10 0 11  
" Silver steel. 0 13  
" Special. 0 17  
" Rex high speed steel. 0 65  
" Self-Hardening. 0 45  
" standard tool steel. 0 09  
" Superior. 0 12 0 13  
" Extra And. 0 15  
" Self-Hardening. 0 45  
" Rex high speed. 0 65  
" Jonas & Colver's tool steel. 0 10  
" "Air Hardening" 0 70  
Drill steel, per lb 0 08 0 10

**RABBIT METAL.**  
"Tandem," A. per lb. 0 27  
" B. " 0 21  
" C. " 0 11 1/2  
Frictionless Metal. " 0 23

Syracuse Smelting Works:  
Aluminum, genuine. 0 45  
Government, " 0 44  
Tough, " 0 40  
Hard, " 0 40  
Dynamo. 0 30  
Special. 0 25  
Harmony. 0 22  
Car Box. 0 20  
Extra. 0 15

The Canada Metal Co.:  
Imperial, genuine. 0 40  
Metallic. 0 30  
Hercules. 0 20  
Star. 0 15  
No. 1. 0 12  
No. 2. 0 10  
No. 3. 0 06  
No. 4. 0 05

Geo. Langwell & Son.  
No. 1. 0 08  
No. 2. 0 07  
No. 3. 0 05 1/2  
Extra. 0 09 1/2

**BLACK SHEETS.**  
Montreal. Toronto  
10 and 16 gauge. 2 25 2 50  
18 gauge. 2 30 2 50  
20 " 2 30 2 50  
22 to 24 gauge. 2 35 2 70  
26 " 2 40 2 80  
28 " 2 40 2 90

**COPPER WIRE.**  
Discount, 50 per cent.

**CANADA PLATES.**  
Ordinary. 2 60  
All bright. 3 50  
Galvanized Canada Plates—

Ordinary. Dom. Crown.  
18x24x52. 4 25 4 35  
" 60. 4 50 4 60  
20x28x80. 8 50 8 70  
" 94. 9 00 9 2

**GALVANIZED SHEETS.** Queen's  
Fleur-de-Lis. Gordon Crown. Comet Bell. Head  
16 gauge. 3 65  
18 to 24 gauge. 3 75 3 75 3 75 3 75  
26 " 4 00 4 00 3 90 4 00  
28 " 4 25 4 25 4 05 4 25

American brands, \$4.00 for 28 gauge.  
Less than case lots 10 to 15c. extra.

**CHAIN.**  
Proof coil, 3-16 in., per 100 lb. 7 00 10 00  
" 5-16 " " 5 60  
" 3-16 " " 4 45  
" 1-2 " " 3 85  
" 1-4 " " 3 70  
" 1-8 " " 3 55  
" 1-16 " " 3 45  
" 1-32 " " 3 35  
" 1-64 " " 3 25

Half, kennel and post chains, 40 to 40 and  
5 per cent.  
Cow ties. 40 p.c.  
Tie out chains. 65 p.c.  
Stall fixtures. 35 p.c.  
Trace chain. 45 p.c.  
Jack chain, iron, single and double, discount  
35 p.c.

Jack chain, brass, single and double, discount  
40 p.c.

**COPPER.**  
Ingot. Per 100 lb.  
Casting, car lots. 13 75  
Bars.

Cut lengths, round, 1/2 to 1/4 in. 21 00 23 00  
" round and square,  
1 to 2 inches. 21 00 23 00

**Sheet.**  
Plain, 16 oz., 14x48 and 14x60 20 00  
Plain, 14 oz. 21 00  
Tinned copper sheet. 24 00  
Planished. 32 00

Braziers' (in sheets).  
4x6 ft., 25 to 30 lb. each, per lb. 0 22  
" 35 to 45 " " 0 21  
" 50-lb. and above " 0 20

**BOILER AND T.K. PITTS.**  
Plain tinned, per lb 0 28  
Spun, per lb. 0 32

**BRASS.**  
Rod and Sheet, 14 to 30 gauge, 15 per cent.  
Sheets, hard-rolled, 2x4 0 23  
Tubing, base, per lb. 0 23 1/2

**ZINC SPELTER.**  
Foreign, per 100 lb 6 00 6 25  
Domestic. " " " "

**ZINC SHEET.**  
5-cwt. casks. 6 15 6 50  
Part casks. 6 50 7 00

**LEAD.**  
Imported Pig, per 100 lb. 3 20 3 30  
Bar, per lb. 0 05  
Sheets, 2 1/2 lb. sq. ft., by roll. 0 06 1/2  
Sheets, 3 to 6 lb. " 0 06

NOTE.—Cut sheets 1/4 c. per lb., extra. Pipe,  
by the roll, usual weights per yard, lists at 7c.  
per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths, net price, waste pipe  
8-ft. lengths, lists at 8c.

**ANTIMONY.**

Cookson's. " " per lb. 7 50 8 00

**SHOT.**  
Common, \$6.50 per 100 lb.; chilled, \$7.00  
per 100 lb.; buck, seal and ball, \$7.50. Dis-  
count, 17 1/2 p.c. Prices are f.o.b. Toronto,  
Hamilton, Montreal, St. John and Halifax.  
Terms, 3 p.c. cash, freights equalized.

### PLUMBING GOODS.

**BATH TUBS.**  
Zinc. Standard Enameled. 6 00  
Copper, discount 20 per cent. off revised list.

**BATHS.**  
Standard Enameled.  
5 1/2-ft. 2 1/2 in. rolled rim, 1st quality. 21 60  
" 2nd " " 16 35

**CLOSETS.** Net.

Fittings. 1 00  
Plain Simplex Syphon Jet. 9 90  
Emb. " 9 50

Fittings. 1 25  
Low Down Elgin or Teutonic, plain. 6 00  
Low " emb. 6 50  
Connection. 1 25  
Plain Richelieu. 4 25  
Emb. 4 50

Connections. 1 25  
Basins, P.O., 14-in. 0 63  
Basins, oval, 17 x 14-in. 1 50  
Basins, " 19 x 15-in. 2 00

**IRON PIPE.**

Black pipe— Per 100 feet.  
1/2 inch. 1 95  
" 3/4 " 2 05  
" 1 " 2 15  
" 1 1/4 " 2 25  
" 1 1/2 " 2 35  
" 1 3/4 " 2 45  
" 2 " 2 55  
" 2 1/2 " 2 65  
" 3 " 2 75  
" 3 1/2 " 2 85  
" 4 " 2 95  
" 4 1/2 " 3 05  
" 5 " 3 15

10 " 10 00  
12 " 18 00  
14 " 21 00  
16 " 26 75  
18 " 27 00  
20 " 32 00  
22 " 38 00  
24 " 40 00  
26 " 53 00

Acme, discount 35 to 37 1/2 per cent.  
Agricultural, discount 60 per cent.  
Coe's Genuine, discount 20 to 25 per cent.  
Towers' Engineer. each 2 00 7 00  
" S. " per doz. 5 80 6 00  
G. & K.'s Pipe. " 3 40  
Burrell's Pipe. each 3 00  
Pocket. " per doz. 0 25 2 90

**Galvanized pipe—**  
1/2 inch. 2 88  
" 3/4 " 3 11  
" 1 " 3 42  
" 1 1/4 " 4 40  
" 1 1/2 " 6 35  
" 1 3/4 " 8 80  
" 2 " 10 75  
" 2 1/2 " 14 80

Malleable Fittings—Discount 20 p.c.  
Cast Iron Fittings—  
Standard, 57 1/2 per cent.; unions, 55 per cent.;  
on nipples, headers and flanged unions, 60  
per cent.

### PLUMBERS' BRASS GOODS.

Standard Compression work, dia. 60 & 10 p.c.  
Cushion work, discount 50 per cent.  
Fuller work, discount 70 per cent.  
6 dozen lots and over of the above, extra dis-  
count 10 per cent.

Lever handle Stops and Waste, discount 60  
per cent. With in lots of 2 dozen and over,  
an extra discount of 10 per cent.

J.M.T. Globe, Angle and Check Valves, dis-  
count 55 per cent.

Standard Globe, Angle and Check Valves,  
discount 65 per cent.

Kerr's special standard globes and angles,  
discount 60 per cent.

Kerr's Jenkin disc, copper-alloy disc and  
heavy standard valves, discount 60 per cent.

Kerr's standard brass checks, discount 60 p.c.  
Kerr's standard brass disc steam radiator  
valves, discount 70 per cent.

Kerr's Jenkin disc, copper-alloy disc radiator  
valves, discount 70 per cent.

Kerr's quick-opening hot-water radiator  
valves, discount 70 and 10 per cent.

Weber's (Kerr) patent straightway gate  
valves, brass, discount 55 per cent.

Weber's (Kerr) patent straightway gate  
valves, I.B.B.M., discount 70 per cent.

J.M.T. Radiator Valves discount 55 per cent.  
Standard Radiator Valves, discount 65 per  
cent.

Patent Quick-Opening Valves, discount 65  
per cent.

No. 1 compression bath cock. net 1 75  
No. 4 " " " 1 90  
No. 7 Fuller's " " 2 10  
No. 4 1/2 " " 2 25

Patent Compression Cushion, basin  
cock, hot and cold. " per doz. 15 00  
Patent Compression Cushion, bath  
cock, No. 2208. " 2 25

Square head brass cocks, discount 55 per cent  
iron " 50 to 60 " 2 50  
Thompson Smoke-test Machine \$25.00

**RANGE BOILERS.**  
Copper, 30 gallon. " 22 00  
" 35 " " 24 00  
" 40 " " 28 00  
Discount off copper boilers 15 per cent.

### SOID PIPE AND FITTINGS.

Light soil pipe, discount, 50 per cent.  
" fittings, discount 50 and 10 p.c.  
Med. and Extra heavy pipe and fittings, dis. 60  
per cent.  
and 8-in. pipe, discount 40 and 5 per cent.

### SOLDER.

Per lb



# American Steel & Wire Co.

**New York**  
Empire Building

**Montreal**  
N. Y. Life Building

**Chicago**  
The Rookery

## BARBED WIRE CALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

**Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.**

### PAINTS AND OILS.

#### COLORS IN OIL.

1-lb. tins, pure.

|                        |      |
|------------------------|------|
| Venetian red, per lb.  | 0 08 |
| Chrome yellow          | 0 15 |
| Golden ochre           | 0 08 |
| French                 | 0 06 |
| Marine black           | 0 04 |
| Chrome green           | 0 10 |
| French permanent green | 0 13 |
| Signwriters' black     | 0 15 |

#### COLORS DRY.

|                                  |                |
|----------------------------------|----------------|
| Pure in bbls., per cwt.          | Less than this |
| quantity to extra.               |                |
| Common ochre, bbls.              | 2 50           |
| Yellow ochre                     | 1 12½          |
| Brussels ochre                   | 2 75           |
| Venetian red                     | 1 50           |
| English oxides                   | 3 00           |
| American oxides                  | 1 25           |
| Canadian red oxides              | 1 50           |
| Super magnetic oxides, 33 p.c.   | 2 00           |
| Burnt sienna                     | 9 00           |
| umber                            | 6 00           |
| Raw umber                        | 6 00           |
| Drop black                       | 12 00          |
| Chrome yellow                    | 0 18           |
| Chrome greens                    | 5 50           |
| French green                     | 0 09           |
| Golden ochre                     | 2 75           |
| Ultramarine blue, in 28-lb. bxs. | 7 00           |
| Fire proof mineral               | 1 00           |
| Genuine Eng. Litharge            | 4 50           |
| Mortar color                     | 1 00           |
| Pure Indian red, lb.             | 0 09           |
| Whiting, bbl.                    | 9 65           |
| English vermilion in 30-lb. bgs. | 0 85           |

#### WHITE LEAD.

Per 100 lb.

|                              |       |
|------------------------------|-------|
| Pure                         | 4 75  |
| No. 1                        | 4 50  |
| No. 2                        | 4 25  |
| No. 3                        | 3 87½ |
| No. 4                        | 3 50  |
| Munro's Select Flake White   | 4 75  |
| Elephant and Decorators Pure | 4 75  |
| Monarch                      | 5 00  |
| Decorators' Pure             | 4 75  |
| Essex Genuine                | 4 25  |
| Sterling Pure                | 5 00  |
| Island City Pure             | 5 00  |
| Ramsay's Pure Lead           | 4 75  |
| Ramsay's Exterior            | 4 50  |

#### RED LEAD.

|                                  |        |        |
|----------------------------------|--------|--------|
| Genuine, 560 lb. casks, per cwt. | \$4 25 | \$4 50 |
| Genuine, 100 lb. kegs.           | 4 75   |        |
| No. 1, 560 lb. casks, per cwt.   | 4 00   |        |
| No. 1, 100 lb. kegs, per cwt.    | 4 25   |        |

#### WHITE ZINC.

|                |      |       |
|----------------|------|-------|
| Extra Red Seal | 0 06 | 0 08  |
| French V. M.   | 0 06 | 0 06½ |
| Lehigh         | 0 06 | 0 06½ |

#### DRY WHITE LEAD.

|              |      |
|--------------|------|
| Pure, casks  | 4 25 |
| Pure, kegs.  | 4 50 |
| No. 1, casks | 4 00 |
| No. 1, kegs. | 4 25 |

#### PREPARED PAINTS.

In ½, 1 and 1-gallon tins.

|                                 |      |
|---------------------------------|------|
| Pure, per gallon                | 1 20 |
| Second qualities, per gallon    | 1 00 |
| Barn (in bbls.)                 | 0 60 |
| The Sherwin-Williams paints     | 1 30 |
| Canada Paint Co.'s pure         | 1 25 |
| Toronto Lead & Color Co.'s pure | 1 25 |
| Sanderson Pease's pure          | 1 20 |
| Standard Co.'s "New Era"        | 1 30 |
| "Globe" barn                    | 60   |
| Francis-Frost Co.'s "Ark" B'd   | 1 25 |
| British Navy deck               | 1 50 |
| Henderson & Potts's "Anchor"    | 1 35 |
| Ramsay's paints, Pure, per gal. | 1 20 |
| "Thistle"                       | 1 00 |
| "Outside, bbls                  | 0 55 |
| Island City House Paint         | 1 25 |
| "Floor                          | 1 25 |
| Sterling House Paint            | 1 20 |
| "Floor                          | 1 10 |
| National                        | 1 05 |

### PUTTY.

|                                            |      |
|--------------------------------------------|------|
| Bulk in bbls.                              | 1 45 |
| Bulk in less quantity                      | 1 70 |
| Bladders in bbls.                          | 1 70 |
| Bladders in kegs, boxes or loose           | 1 85 |
| 25-lb. tins.                               | 1 80 |
| 12½ lb. tins                               | 2 05 |
| Bladders in bulk or tins less than 100 lb. | 1 85 |

### VARNISHES.

In 5-gal. lots. Per gal. Net.

|                                                                            |      |      |
|----------------------------------------------------------------------------|------|------|
| Carriage, No. 1                                                            | 1 50 | 1 60 |
| Pale durable body                                                          | 4 10 | 4 25 |
| "rubbing                                                                   | 2 85 | 3 20 |
| Gold size, japan                                                           | 1 50 | 1 60 |
| No. 1 brown japan                                                          | 0 85 | 0 90 |
| Elastic oak                                                                | 1 50 | 1 50 |
| Furniture, extra                                                           | 1 10 | 1 25 |
| "No. 1                                                                     | 0 90 | 1 00 |
| Hard oil finish                                                            | 1 35 | 1 50 |
| Light oil finish                                                           | 1 60 | 1 70 |
| Damar                                                                      | 1 75 | 2 00 |
| shellac, white                                                             | 2 40 | 2 50 |
| "orange                                                                    | 2 30 | 2 40 |
| Turpentine, brown japan                                                    | 1 10 | 1 20 |
| "black japan                                                               | 1 10 | 1 20 |
| "No. 1                                                                     | 0 85 | 0 90 |
| Elastolite varnish, 1 gal. can, each                                       | 2 00 |      |
| Granite floor finish, per gal                                              | 2 75 |      |
| Maple Leaf coach enamels; size 1, \$1.20; size 2, 70c.; size 3, 40c. each. |      |      |
| Sherwin-Williams' kopal varnish, assorted case, from 1 gal., \$2.50.       |      |      |

### GLUE.

|                  |      |       |
|------------------|------|-------|
| Common           | 0 08 | 0 08½ |
| French medal     | 0 10 | 0 14  |
| White, extra     | 0 18 | 0 22  |
| Gelatine         |      |       |
| Strip            | 0 18 | 0 20  |
| Coopers          | 0 19 | 0 20  |
| Huttner          |      |       |
| Ground           | 0 12 | 0 16  |
| Cologne, genuine |      |       |

### HARDWARE.

#### AMMUNITION.

#### Cartridges.

|                                                                                                                       |  |
|-----------------------------------------------------------------------------------------------------------------------|--|
| B. B. Caps Dominion, 50 and 5 and 25 per cent.                                                                        |  |
| Rim Fire Pistol, discount 30 p.c., American.                                                                          |  |
| Rim Fire Cartridges, Dominion, 50 and 5 p.c.                                                                          |  |
| Central Fire, Military and Sporting, American, add 20 per cent. to list. B. B. Caps, discount 40 per cent., American. |  |
| Central Fire Pistol and Rifle, 5 p.c., Amer.                                                                          |  |
| Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.                                                         |  |
| Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.                                                |  |
| Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.                                         |  |
| Rival and Nitro, 10 per cent. advance on list.                                                                        |  |
| Brass Shot Shells, 55 per cent.                                                                                       |  |
| Primers, Dom., 30 per cent.; American, \$1.75                                                                         |  |

#### Wads.

per lb.

|                                                                                      |             |
|--------------------------------------------------------------------------------------|-------------|
| Best thick brown or grey felt wads, in ½-lb. bags                                    | \$0 70      |
| Best thick white card wads, in boxes of 500 each, 12 and smaller gauges              | 0 99        |
| Best thick white card wads, in boxes of 500 each, 10 gauge                           | 0 35        |
| Thin card wads, in boxes of 1,000 each, 12 and smaller gauges                        | 0 20        |
| Thin card wads, in boxes of 1,000 each, 10 gauge                                     | 0 25        |
| Chemically prepared black edge grey cloth wads, in boxes of 250 each—                |             |
| 11 and smaller gauge                                                                 | Per M. 0 60 |
| 9 and 10 gauges                                                                      | 0 70        |
| 7 and 8                                                                              | 0 90        |
| 5 and 6                                                                              | 1 10        |
| Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each— |             |
| 11 and smaller gauge                                                                 | 1 15        |
| 9 and 10 gauges                                                                      | 1 40        |
| 7 and 8                                                                              | 1 65        |
| 5 and 6                                                                              | 1 90        |

### ADZES.

Discount 20 per cent.

### ANVILS.

|                             |       |
|-----------------------------|-------|
| Wright's, 80-lb. and over   | 0 10½ |
| Hay Budden, 80-lb. and over | 0 09½ |
| Brook's, 80-lb. and over    | 0 11½ |

### APPLE PARERS.

Woodyatt Hudson, per doz., net 4 50

### AUGERS.

Gilmour's, discount 65 and 5 per cent. off list.

### AXES.

|                          |       |       |
|--------------------------|-------|-------|
| Chopping Axes            |       |       |
| Single bit, per doz.     | 7 00  | 10 00 |
| Double bit               | 10 00 | 18 00 |
| Bench Axes, 40 per cent. |       |       |
| Broad Axes, 25 per cent. |       |       |
| Hunters' Axes            | 5 50  | 6 00  |
| Boys' Axes               | 6 25  | 7 00  |
| Splitting Axes           | 7 00  | 12 00 |
| Handled Axes             |       | 10 00 |

### AMERICAN AXE AND TOOL CO.

|                                        |      |
|----------------------------------------|------|
| Red Ridge, boys', handled              | 5 75 |
| "hunters"                              | 5 25 |
| Underhill American Bench Axes, 40 p.c. |      |

### AXLE GREASE.

Ordinary, per gross 6 00 7 00

Best quality 10 00 12 00

### BELLS.

Hand.

Brass, 60 per cent.

Nickel, 55 per cent.

### Cow.

American make, discount 63½ per cent.

Canadian, discount 45 and 50 per cent.

### Door.

Gongs, Sargent's 5 50 8 00

"Peterboro", discount 50 and 10

per cent. off new list.

### Farm.

American, each 1 25 3 00

### House.

American, per lb. 0 35 0 40

### BELLOWS.

Hand, per doz. 3 35 4 75

Moulders', per doz. 7 50 10 00

Blacksmiths', discount 40 per cent.

### BELTING.

Extra, 60 per cent.

Standard, 60 and 10 per cent.

No. 1, not wider than 6 in., 60, 10 and 10 per cent.

Agricultural, not wider than 4 in., 75 per cent.

### BITTS.

#### Auger.

Gilmour's, discount 50 per cent.

Rockford, discount 50 and 10 per cent.

Jennings' Gen., net list.

#### Car.

Gilmour's, 47½ per cent.

#### Expansive.

Clark's, 40 per cent.

#### Gimlet.

Clark's, per doz. 0 65 0 90

Diamond, Shell, per doz. 1 00 1 50

Nail and Spike, per gross. 2 25 5 20

### BLIND AND RED STAPLES.

All sizes, per lb. 0 07½ 0 12

### BOLTS AND NUTS

Carriage Bolts, common (\$1 list)

" " 3-16 and ½ 60 and 10

" " 5-16 and ¾ 55 and 5

" " 7-16 and up 55 and 5

" " full sq. (\$2.40 list) 60

" " Norway Iron (\$3 list) 60

Machine Bolts, all sizes, ½ and less 60

Machine Bolts, 7-16 and up 60

Blank Bolts 55 and 5

Bolt Ends 55 and 5

Sleigh Shoe Bolts 70

Coach Screws, cone point 70

Nuts, square, all sizes, 4c. per lb. off.

Nuts, hexagon, all sizes, 4c. per lb. off.

Stove Rods per lb., ½ to 6c.

### ROOT CALKS.

Small and medium, ball 4 25

Small heel 4 50

### BRIGHT WIRE GOODS.

Discount 62½ per cent.

### BUTCHERS' CLEAVERS.

|          |          |       |       |
|----------|----------|-------|-------|
| German   | per doz. | 6 00  | 9 00  |
| American | "        | 12 00 | 18 00 |

### BUTCHER KNIVES.

|          |          |      |      |
|----------|----------|------|------|
| Bailey's | per doz. | 0 60 | 6 30 |
|----------|----------|------|------|

### BUILDING PAPER, ETC.

Tarred Felt, per 100 lb. 1 85

Ready roofing, 2-ply, not under 45 lb. per roll 0 90

Ready roofing, 3-ply, not under 65 lb. per roll 1 15

Carpet Felt 45 00

Heavy Straw Sheathing 35 00

Dry Sheathing 40 00

Tar 400 0 50

Dry Fibre 400 0 55

Tarred Fibre 400 0 65

O. K. & I. X. L. 400 0 70

Resin-sized 400 0 45

Oiled Sheathing 600 1 00

Oiled 400 0 70

Roof Coating, in barrels 0 17

Roof small packages 0 25

Refined Tar 5 00

Coal Tar 4 00

Coal Tar, less than barrels 0 15

Roofing Pitch 100 lb. 1 00

### BULL RINGS.

Copper, \$2.00 for 2½-inch, and \$1.9 0 or 2-inch.

### BUTTS.

Wrought Brass, net revised list.

### Cast Iron.

Loose Pin, discount 60 per cent.

### Wrought Steel.

Fast Joint, discount 65, 10 and 2½ per cent.

Loose Pin, discount 65, 10 and 2½ per cent.

Berlin Bronzed, discount 70, 70 and 5 per cent.

Gen. B ronzed 0 40 0 65

### CARPET STRETCHERS.

American 1 00 1 50

Bullard's 6 50

### CASTORS.

Bed, new list, discount 55 to 57½ per cent.

Plate, discount 52½ to 57½ per cent.

### CATTLE LEADERS.

Nos. 32 and 33 7 50 8 50

### CHALK.

Carpenters' Colored, per gross 0 45 0 75

White lump 0 60 0 85

Red 0 05 0 06

Crayon 0 14 0 18

### CHISELS.

Socket, Framing and Firmer.

Broad's, discount 60 and 10 per cent.

Warnock's, discount 50 and 10 per cent.

P. S. & W. Extra, discount 60 and 10 per cent.

### FOODS—STOCK.

Colonial Stock Foods, 50c. packages, per doz \$4 00

" " 25c. pkgs., 2 00



# An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

## The Paterson Mfg. Co., Limited

Toronto and Montreal.

### COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

### CONDUCTOR PIPE.

Plain or Corrugated.

|        |              |      |
|--------|--------------|------|
| 1-inch | per 100 feet | 3 00 |
| 3 "    | "            | 4 00 |
| 4 "    | "            | 5 25 |
| 5 "    | "            | 6 75 |
| 6 "    | "            | 9 00 |

### CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

### CROSSCUT SAW HANDLES.

|                 |          |       |
|-----------------|----------|-------|
| S. & D., No. 3  | per pair | 0 17½ |
| S. & D., " 5    | "        | 0 22½ |
| S. & D., " 6    | "        | 0 15  |
| Boynton pattern | "        | 0 20  |

### DOOR SPRINGS.

|                   |          |      |
|-------------------|----------|------|
| Torrey's Rod      | per doz. | 1 75 |
| Coil, 9 to 11 in. | "        | 0 95 |
| English           | "        | 2 00 |

### DRAW KNIVES.

Co and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

### DRILLS.

Hand and Breast.

Miller's Falls, per doz., net list.

### DRILL BITS.

Morse, discount 37½ to 40 per cent.

Standard, discount 50 and 5 to 55 per cent.

### FAUCETS.

Common, cork-lined, discount 35 per cent.

### EAVETROUGHS.

10-inch ..... per 100 ft. 10 00

### ELBOWS (stovepipe.)

|                      |          |      |
|----------------------|----------|------|
| 5 and 6-inch, common | per doz. | 1 20 |
| 7-inch               | "        | 1 35 |

### ESCUTCHEONS.

Discount 50 and 10 per cent., new list

### ESCUTCHEON PINS.

Iron, discount 40 per cent.

### FACTORY MILK CANS.

Discount off revised list, 40 per cent.

### FILES AND RASPS.

|                                                                         |                     |
|-------------------------------------------------------------------------|---------------------|
| Great Western                                                           | 70 and 10 per cent. |
| Arcade                                                                  | 70 " "              |
| Kearney & Foot                                                          | 70 " "              |
| Disston's                                                               | 70 " "              |
| American                                                                | 70 " "              |
| J. Barton Smith                                                         | 70 " "              |
| McClellan                                                               | 70 " "              |
| Eagle                                                                   | 70 " "              |
| Nicholson, 60 and 10 to 60, 10 and 5                                    | " "                 |
| Royal                                                                   | 80 " "              |
| Globe                                                                   | 70 to 75 " "        |
| Black Diamond, 60 and 10 to 60, 10 and 5 per cent.                      | " "                 |
| Jewitt's, English list, 25 to 27½ per cent.                             | " "                 |
| Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50 | " "                 |

### GLASS.

Window. Box Price.

| Size United Inches   | Per 50 ft. | Star 100 ft. | D. Diamond Per 50 ft. | Per 100 ft. |
|----------------------|------------|--------------|-----------------------|-------------|
| Under 26             | 3 80       |              | 5 06                  |             |
| 26 to 40             | 4 00       |              | 5 44                  |             |
| 41 to 50             | 4 50       |              | 6 56                  |             |
| 51 to 60             | 4 75       |              | 7 50                  |             |
| 61 to 70             | 5 00       |              | 8 62                  |             |
| 71 to 80             | 5 30       |              | 9 38                  |             |
| 81 to 85             |            |              | 10 75                 |             |
| 86 to 90             |            |              | 12 30                 |             |
| 91 to 95             |            |              | 15 00                 |             |
| 96 to 100            |            |              | 18 00                 |             |
| Discount 15 per cent |            |              |                       |             |

### GAUGES.

Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

### Wire Gauges.

Winn's, Nos. 26 to 33 ..... each 1 65 2 40

GILLET'S POWDERED LYE.

1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.

### HALTERS.

|                     |           |       |
|---------------------|-----------|-------|
| Rope, 1-inch        | per gross | 12 00 |
| Rope, 1 1/2-inch    | "         | 9 00  |
| Rope, 2-inch        | "         | 14 00 |
| Leather, 1-inch     | per doz.  | 4 00  |
| Leather, 1 1/2-inch | "         | 5 20  |
| Web                 | "         | 2 45  |

### HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

### Tack.

Magnetic ..... per doz. 1 10 1 20

### Sledge.

Canadian ..... per lb. 8 07½ 0 08½

### Ball Pean.

English and Canadian, per lb. 0 22 0 25

### HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00

Store door ..... per doz. 1 00 1 50

### Fork.

C. & B., discount 40 per cent., revised list.

### Hoe.

C. & B., discount 40 per cent., revised list.

### Saw.

American ..... per doz. 1 00 1 25

### Plane.

American ..... per gross 3 15 3 75

### Hammer and Hatchet.

Canadian, discount 40 per cent.

### HANGERS.

No. 11, 5-foot run ..... doz. pairs. 8 40

No. 11½, 10-foot run ..... 10 80

No. 12, 10-foot run ..... 12 60

No. 14, 15-foot run ..... 21 00

Steel, covered ..... 4 00 11 00

" track, 1 x 3-16 in (100 ft) ..... 3 75

" 1½ x 3-16 in (100 ft) ..... 4 75

### HARVEST TOOLS.

Discount 60 per cent.

### HATCHETS.

Canadian, discount 40 to 42½ per cent.

Shingle, Red Ridge 1, per doz. .... 4 40

" 2, ..... 4 85

Barrel, Underhill ..... 5 00

### HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

### HINGES.

Blind, Parker's, discount 60 per cent.

Heavy T and strap, 4-in., per lb. .... 0 06½

" " 5-in., " ..... 0 06½

" " 6-in., " ..... 0 06

" " 8-in., " ..... 0 05½

" " 10-in., " ..... 0 05½

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in. .... per 100 lb. .... 4 50

12 in. up ..... 3 25

Spring, No. 20, per gro. pairs ..... 10 50

### HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter ..... per doz. 4 00 4 50

### HOLLOW WARE.

Tinned cast, 35 per cent.

### HOOKS.

Cast Iron.

d cage ..... per doz. 0 50 10

Clothes line, No. 61 ..... 0 00 0 70

Harness ..... 0 60 12 00

Hat and coat ..... per gro. 1 10 10 00

Chandelier ..... per doz. 0 50 1 00

### Wrought Iron.

Wrought hooks and staples Canadian discount 60 per cent.

### Wire.

Hat and coat, discount 60 per cent.

Belt ..... per 1,000 ..... 0 60

Screw, bright, discount 60 per cent.

### HORSE NAILS.

"C" brand, 40, 10 and 7½ per cent. off list { Oval

"M" brand, 55, per cent. " head

Countersunk, 57½ per cent.

"Monarch," 50 and 7½ per cent.

"Peerless" 50 per cent. dis.

### HORSESHOES.

F.O.B. Montreal

No. 2 No. 1

and and

larger smaller.

Iron Shoes.

Light, medium and heavy ..... 3 65 3 90

Snow shoes ..... 3 90 4 15

### Steel Shoes.

XL, sizes 1 to 5 ..... 5 35

Light, No. 2 and larger ..... 3 80

No. 1 and smaller ..... 4 05

Featherweight, all sizes 0 to 4 ..... 5 35

Toeweight, all sizes 1 to 4 ..... 6 60

### JAPANNED WARE.

Discount 50 per cent.

### ICE PICKS.

Star ..... per doz. 00 3 25

### KETTLES.

Brass spun 7½ per cent. discount off new list.

Copper ..... per lb. 0 30 0 50

American, 60 and 10 to 65 and 5 per cent.

### KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,

American ..... per gross ..... 0 60

### KNOBS.

Door, japanned and N.P., per

doz. .... 1 50 2 50

Bronze, Berlin ..... per doz. 2 75 3 25

Bronze, Genuine ..... 6 00 9 00

Shutter, porcelain, F. & L.

screw ..... per gross 1 30 00

White door knobs ..... per doz. .... 2 00

### HAY KNIVES.

Net prices.

### LAMP WICKS.

Discount, 60 per cent.

### LANTERNS.

Cold Blast ..... per doz. 7 00

No. 3, "Wright's" ..... 8 50

Ordinary, with O burner ..... 4 00

Dashboard, cold blast ..... 9 00

No. 0 ..... 5 75

Japanning, 50c. per doz. extra.

### LEMON SQUEEZERS.

Porcelain lined ..... per doz. 2 20 5 60

Galvanized ..... 1 87 3 85

King, wood ..... 2 75 2 90

King, glass ..... 4 00 4 50

All glass ..... 0 50 0 90

### LINE.

Fish ..... per gross 1 05 2 50

Chalk ..... 1 90 7 40

### LAWN MOWERS.

Woodyatt, 10½-in. wheel, 14-in. cut ..... 8 50

Star, 9-in. " ..... 7 00

Daisy, 8-in. " (net) ..... 2 87½

Philadelphia, 7½-in. " ..... 7 00

Ontario, 7½-in. " ..... 15 80

King Edw'd, 12-in. " ..... 9 50

Discount, 50 per cent., with freight concessions in quantity shipments.

### Maxwell & Sons:

10½-in. high wheel ..... 7 50 10 00

9-in. " ..... 5 50 6 25

8-in. " ..... 4 90 5 50

Discount 50 per cent.

### LOCKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwin ..... per doz.

### Cabinet.

Eagle, discount 30 per cent.

### Padlocks.

English and Am. .... per doz. 0 50 6 00

Eagle, discount 20 to 25 per cent.

### MACHINE SCREWS.

Iron and Brass.

Flat head, discount 25 per cent.

Round head, discount 20 per cent.

### MALLETS.

Tinsmiths' ..... per doz. 1 25 1 50

Carpenters' hickory, " 1 25 3 75

Lignum Vitae, " 3 85 5 00

Caulking, each ..... 0 60 2 00

### MATTOCKS.

Canadian ..... per doz. 5 50 6 00

### MEAT CUTTERS.

American, discount 3½ per cent.

German, 15 per cen

Gem ..... each .... 1 15

### MILK CAN TRIMMINGS.

Discount 25 per cent.

### NAILS.

2d and 3d ..... Cut. Wire.

3d ..... 3 30 3 45

4 and 5d ..... 2 70 2 95

6 and 7d ..... 2 60 2 80

8 and 9d ..... 2 45 2 60

10 and 12d ..... 2 40 2 55

16 and 20d ..... 2 35 2 50



# Remington

NEW MODEL No. 9

## Single Barrel Shotgun

This Remington is distinctly a high grade product with special steel barrel, pistol grip, rebounding hammer, side cocking lever, top snap action and has automatic ejector. Made in all popular gauges. An ideal boy's gun and good enough for any man. For sale by all dealers.

Send for new Beautifully Illustrated Catalog.

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|                                                   |                      |                                                   |                       |                                                |                       |                                                   |           |
|---------------------------------------------------|----------------------|---------------------------------------------------|-----------------------|------------------------------------------------|-----------------------|---------------------------------------------------|-----------|
| <b>PLANE IRONS.</b>                               |                      | <b>SAP SPOUTS.</b>                                |                       | <b>STAPLES.</b>                                |                       | <b>ENAMELLED WARE.</b>                            |           |
| English .....                                     | per doz. 2 00 5 00   | Bronzed iron with hooks .....                     | per 1,000 7 50        | Galvanized .....                               | 3 00                  | White, Princess, Turquoise, Blue and White        |           |
| <b>PLIERS AND NIPPERS.</b>                        |                      | "Eureka" tinned steel, hooks "                    | 8 00                  | Plain .....                                    | 2 80                  | discount 50 per cent. ....                        |           |
| Button's genuine, per doz. pairs, discount        |                      | <b>SAWS.</b>                                      |                       | Coopers, discount 45 per cent.                 |                       | Diamond, Famous, Premier, discount 50 and         |           |
| 37 1/2 to 40 per cent.                            |                      | Hand, Disston's, discount 12 1/2 per cent         |                       | Poultry netting staples, discount 40 per cent. |                       | 10 per cent. ....                                 |           |
| Button's imitation .....                          | per doz. 5 00 9 00   | S. & D., discount 40 per cent.                    |                       | <b>STOCKS AND DIEN.</b>                        |                       | Granite or Pearl, Imperial, Crescent, discount    |           |
| German .....                                      | " 0 60 60            | Crosscut, Disston's .....                         | per foot 0 35 0 55    | American discount 25 per cent.                 |                       | 50, 10 and 10 per cent.                           |           |
| <b>PRESSED SPIKES.</b>                            |                      | S. & D., discount 35 per cent. on Nos. 2 and 3.   |                       | <b>STONE.</b>                                  |                       | Premier steel ware, 40 per cent.                  |           |
| Discount 20 per cent.                             |                      | Hack, complete .....                              | each 0 75 2 75        | Washita .....                                  | per lb. 0 23 0 60     | "Star" decorated steel and decorated white,       |           |
| <b>PULLEYS.</b>                                   |                      | " frame only .....                                | each 0 50 1 25        | Hindustan .....                                | " 0 06 0 07           | 25 per cent.                                      |           |
| Hothouse .....                                    | per doz. 0 55 1 00   | <b>SASH WEIGHTS.</b>                              |                       | Labrador .....                                 | " 0 09 0 09           | <b>WIRE.</b>                                      |           |
| Axle .....                                        | " 0 22 0 33          | Sectional .....                                   | per 100 lb. 2 00 2 25 | Turkey .....                                   | " 0 13 0 15           | <b>Smooth Steel Wire.</b>                         |           |
| Screw .....                                       | " 0 27 1 00          | Solid .....                                       | " 1 50 1 75           | Arkansas .....                                 | " 1 50 1 50           | No. 0-9 gauge .....                               | \$2 50    |
| Awning .....                                      | " 0 35 2 50          | <b>SASH CORD.</b>                                 |                       | Water-of-Ayr .....                             | " 0 10 0 10           | 10 " .....                                        | 60 extra. |
| <b>PUMPS.</b>                                     |                      | Per lb. ....                                      | 0 28 0 30             | Scythe .....                                   | per gross 3 50 5 00   | 11 " .....                                        | 120. "    |
| Canadian cistern .....                            | 1 80 3 60            | <b>SAW SETS.</b>                                  |                       | Grind, 2-in., 40 to 200 lb., per ton           | 25 00                 | 12 " .....                                        | 200. "    |
| Canadian pitcher spout .....                      | 1 40 2 10            | Lincoln and Whiting .....                         | 4 75                  | " under 4 lb., "                               | 28 00                 | 13 " .....                                        | 300. "    |
| <b>PUNCHES.</b>                                   |                      | Hand Sets, Perfect .....                          | 4 00                  | " under 2 in. thick, "                         | 29 00                 | 14 " .....                                        | 400. "    |
| Saddler's .....                                   | per doz. 1 00 1 85   | X-Cut Sets, .....                                 | 7 50                  | <b>STOVEPIPIES.</b>                            |                       | 15 " .....                                        | 550. "    |
| Conductor's .....                                 | " 3 00 15 00         | <b>SCALES.</b>                                    |                       | 5 and 6 inch, per 100 lengths .....            | 7 00                  | 16 " .....                                        | 700. "    |
| Pinners, solid .....                              | per set 0 72         | Gurney Standard, 40 per cent.                     |                       | 7 inch .....                                   | 7 50                  | Add 60c. for coppering and \$2 for tinning.       |           |
| " hollow .....                                    | per inch 1 00        | Gurney Champion, 50 per cent.                     |                       | <b>ENAMELINE STOVE POLISH.</b>                 |                       | Extra net per 100 lb.—Oiled wire 10c.,            |           |
| <b>RAKES.</b>                                     |                      | Burrow, Stewart & Milne—                          |                       | No. 4, 3 doz. in case, net cash .....          | 4 80                  | spring wire \$1.25, special hay baling wire 30c., |           |
| Wood .....                                        | per doz. net 1 20 up | Imperial Standard, discount 40 per cent.          |                       | No. 6, 3 doz. in case .....                    | 8 40                  | best steel wire 75c., bright soft drawn 15c.,     |           |
| <b>RAZORS.</b>                                    |                      | Weigh Beams, discount 35 per cent.                |                       | <b>TACKS, BRADS, ETC.</b>                      |                       | charcoal (extra quality) \$1.25, packed in cases  |           |
| Elliot's .....                                    | per doz. 4 00 18 00  | Champion Scales, discount 50 per cent.            |                       | Carpet tacks, blue .....                       | 80 and 15             | or cases 15c., bagging and papering 10c., 60      |           |
| Geo. Butler's & Co.'s .....                       | 4 00 18 00           | Fairbanks standard, discount 50 per cent.         |                       | " " tinned .....                               | 80 and 20             | and 100-lb. bundles 10c., in 25-lb. bundles       |           |
| Boker's .....                                     | 7 50 11 00           | " Dominion, discount 55 per cent.                 |                       | " (in kegs) .....                              | 40                    | 15c., in 5 and 10-lb. bundles 25c., in 1-lb.      |           |
| " King Cutter .....                               | 12 50 15 00          | " Richelieu, discount 40 per cent.                |                       | Cut tacks, blue, in dozens only                | 80                    | hanks, 50c., in 1-lb. hanks 75c., in 1-lb.        |           |
| Wade & Butcher's .....                            | 3 60 10 00           | " Warren's new Standard, discount 50 per cent.    |                       | " 1/2 weights .....                            | 60                    | hanks \$1.                                        |           |
| Theile & Quack's .....                            | 7 00 12 00           | " Weighbeams, discount 35 per cent.               |                       | Swedes cut tacks, blue and tinned—             | 80 and 10             | Fine Steel Wire, discount 25 per cent.            |           |
| Carbo Magnetic .....                              | 15 00                | " " Champion, discount 50 per cent.               |                       | In bulk .....                                  | 80 and 10             | List of extras: In 100-lb. lots: No. 17,          |           |
| Griffon Barber's Favorite .....                   | 10 75                | " " Weighbeams, discount 35 per cent.             |                       | In dozens .....                                | 75                    | \$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.65—    |           |
| Griffon No. 65 .....                              | 13 00                | <b>SCREW DRIVERS.</b>                             |                       | Swedes, upholsterers', bulk .....              | 85, 12 1/2 and 12 1/2 | No. 21, \$7—No. 22, \$7.30—No. 23, \$7.65—No.     |           |
| Griffon Safety Razors .....                       | 13 50                | Sargent's .....                                   | per doz. 0 65 1 00    | " brush, blue and tinned                       | 70                    | 24, \$8—No. 25, \$9—No. 26, \$9.50—No. 27,        |           |
| Griffon Stropping Machines .....                  | 13 50                | <b>SCREEN DOORS.</b>                              |                       | Swedes, gimp, blue, tinned and                 | 75 and 12 1/2         | \$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—      |           |
| Lewis Bros' "Klean Kutter" .....                  | 8 50 10 50           | Common doors, 2 or 3 panel, walnut                |                       | japanned .....                                 | 75 and 12 1/2         | No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,    |           |
| Clausa, 50 and 10 per cent.                       |                      | stained, 4-in. style .....                        | per doz. 6 50         | Zinc tacks .....                               | 35                    | \$17. Extras net—tinned wire, Nos. 17-25,         |           |
| Clausa Strops, 50 and 10 per cent.                |                      | Common doors, 2 or 3 panel, yellow and            |                       | Leather carpet tacks .....                     | 55                    | \$2—Nos. 26-31, \$4—Nos. 32-34, \$6. Coppered,    |           |
| <b>REGISTERS.</b>                                 |                      | green stained, 4-in. style .....                  | per doz. 6 75         | Copper tacks .....                             | 50                    | 5c.—oiling, 10c.—in 25-lb. bundles, 15c.—in 5     |           |
| Discount 40 per cent.                             |                      | Common doors, 2 or 3 panel, in natural            |                       | Copper nails .....                             | 52 1/2                | and 10-lb. bundles, 25c.—in 1-lb. hanks, 25c.     |           |
| <b>RIVETS AND BURKS.</b>                          |                      | colors, oil finish .....                          | per doz. 8 75         | Trunk nails, black .....                       | 65 and 5              | —in 1-lb. hanks, 38c.—in 1-lb. hanks, 50c.—       |           |
| Iron Rivets, black and tinned, 60 and 10 p.c.     |                      | 3-in. style 20c. per dozen less.                  |                       | Trunk nails, tinned .....                      | 65 and 10             | packed in cases or cases, 15c.—bagging or         |           |
| Iron Burrs, discount 50 per cent.                 |                      | <b>SCREWS.</b>                                    |                       | Clout nails, blue .....                        | 65 and 5              | papering, 10c.                                    |           |
| Extras on Iron Rivets in 1-lb. cartons, 1c.       |                      | Wood, F. H., bright and steel, discount 87 1/2    |                       | Chair nails .....                              | 35                    | Brass wire, discount 60 per cent. off the list.   |           |
| per lb.                                           |                      | per cent.                                         |                       | Patent brads .....                             | 40                    | Copper wire, discount 60 per cent. net cash       |           |
| Extras on Iron Rivets in 1/2-lb. cartons, 1c.     |                      | Wood, R. H., bright, dis. 82 1/2 per cent.        |                       | Fine finishing .....                           | 40                    | 30 days, f.o.b. factory.                          |           |
| per lb.                                           |                      | " F. H., brass, dis. 80 per cent.                 |                       | Lining tacks, in papers .....                  | 15                    | Galvanized wire, per 100 lb.—Nos. 4 and 5,        |           |
| Copper Rivets, with usual proportion burrs, 45    |                      | " R. H., dis. 75 per cent.                        |                       | " " solid heads, in bulk                       | 75                    | \$3.70 to \$3.70—Nos. 6, 7, 8, \$3.15 to \$3.15   |           |
| per cent. Cartons, 1c. per lb. extra, net.        |                      | " R. H., dis. 70 per cent.                        |                       | in bulk .....                                  | 15                    | —No. 9, \$2.55—No. 10, \$3.20 to \$3.20           |           |
| Copper Burrs only, discount 30 and 10 per cent.   |                      | Drive Screws, dis. 87 1/2 per cent.               |                       | Saddle nails, in papers .....                  | 10                    | —No. 11, \$3.25 to \$3.25—No. 12, \$2.65—         |           |
| Extras on Tinned or Coppered Rivets, 1/2-lb.      |                      | Bench, wood .....                                 | per doz. 3 25 4 00    | in bulk .....                                  | 15                    | —No. 13, \$2.75—No. 14, \$3.75 to \$3.75—No.      |           |
| cartons, 1c. per lb.                              |                      | iron .....                                        | 4 25 5 00             | Tufting buttons, 22 line, in doz-              | 60                    | 15, \$4.30—No. 16, \$4.30. Base sizes, Nos.       |           |
| <b>RIVET SETS.</b>                                |                      | Set, case hardened, dis. 60 per cent.             |                       | ens only .....                                 | 60                    | 6 to 9, \$2.27 1/2 f.o.b. Cleveland. In carlots   |           |
| Canadian, discount 35 to 37 1/2 per cent.         |                      | Square Cap, dis. 50 and 5 per cent.               |                       | Zinc glaziers' points .....                    | 5                     | 1240. less.                                       |           |
| <b>ROPE, ETC.</b>                                 |                      | Hexagon Cap, dis. 45 per cent.                    |                       | Double pointed tacks, papers .....             | 90 and 10             | Clothes Line Wire, regular 7 strand, No. 17,      |           |
| Sisal .....                                       | 0 11 1/2             | <b>SCYTHES.</b>                                   |                       | Clinch and duck rivets .....                   | 45                    | \$4.65; No. 18, \$2.90; No. 19, \$2.60. Hollow    |           |
| Pure Manila .....                                 | 0 14 1/2             | Per doz. net .....                                | 6 00 9 00             | <b>TAPE LINES.</b>                             |                       | 6 strand, No. 17, \$4.30; No. 18, \$2.70; No.     |           |
| "British" Manila .....                            | 0 12                 | <b>SCYTHE SNATHS.</b>                             |                       | English, ass skin .....                        | 2 75 5 00             | 19, \$2.35; No. 20, \$2.50, f.o.b. Hamilton,      |           |
| Cotton, 3-16 inch and larger .....                | 0 20 1/2             | Canadian, discount 40 per cent.                   |                       | English, Patent Leather .....                  | 5 50 9 75             | Toronto, Montreal.                                |           |
| " 5-32 inch .....                                 | 0 25 27              | <b>SCYTHES.</b>                                   |                       | Chesterman's .....                             | each 0 90 2 85        | <b>WIRE FENCING.</b>                              |           |
| " 1 inch .....                                    | 0 25 28              | Clausa, nickel, discount 90 per cent.             |                       | steel .....                                    | each 0 80 8 00        | Galvanized barb .....                             |           |
| Russia Deep Sea .....                             | 0 16                 | Clausa, Japan, discount 67 1/2 per cent.          |                       | <b>TINNERS' SNIPS.</b>                         |                       | .....                                             |           |
| Jute .....                                        | 0 09                 | Clausa, tailors, discount 40 per cent.            |                       | Per doz. ....                                  | 3 00 15 00            | .....                                             |           |
| Lath Yarn, single .....                           | 0 10                 | Seymour's, discount 50 and 10 per cent.           |                       | Clausa, discount 35 per cent.                  |                       | High Carbon, No. 9 .....                          |           |
| " double .....                                    | 0 10                 | <b>SHOVELS AND SPADES.</b>                        |                       | Tin case and dairy, 75 to 75 and 10 per cent.  |                       | No. 11 .....                                      |           |
| Sisal bed cord, 48 feet .....                     | per doz. 0 65        | Canadian, discount 45 per cent.                   |                       | <b>TRAPS (steel).</b>                          |                       | No. 12 .....                                      |           |
| " 60 feet .....                                   | 0 80                 | <b>SINKS.</b>                                     |                       | Game, Newhouse, discount 25 per cent.          |                       | <b>WIRE CLOTH.</b>                                |           |
| " 72 feet .....                                   | 0 85                 | Cast iron, 16 x 24 .....                          | 0 85                  | Game, H. & N., P. S. & W., 65 per cent.        |                       | Painted Screen, per 100 sq. ft., net..            |           |
| <b>RULES.</b>                                     |                      | " 18 x 30 .....                                   | 1 00                  | Game, steel, 72 1/2, 75 per cent.              |                       | 1 50                                              |           |
| Boxwood, discount 55 per cent.                    |                      | " 18 x 36 .....                                   | 1 40                  | <b>TROWELS.</b>                                |                       | <b>WASHING MACHINES.</b>                          |           |
| Ivory, discount 37 1/2 to 40 per cent.            |                      | <b>SNAPS.</b>                                     |                       | Disston's, discount 10 per cent.               |                       | Round, re-acting, per doz. ....                   |           |
| <b>SAD IRONS.</b>                                 |                      | Harness, German, discount 25 per cent.            |                       | German .....                                   | per doz. 4 75 6 00    | Square .....                                      |           |
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| Emery, discount 40 per cent.                      |                      | " No. 494 .....                                   | 3 25 3 40             | <b>VISES.</b>                                  |                       | Leader .....                                      |           |
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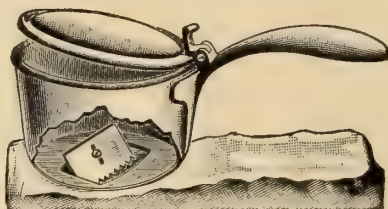
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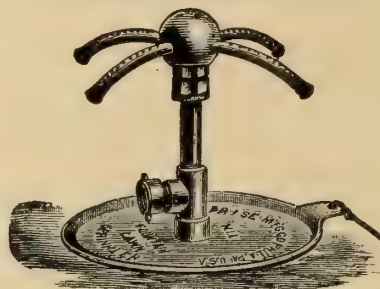
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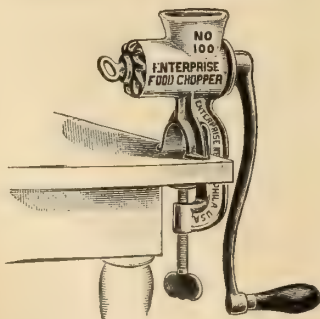
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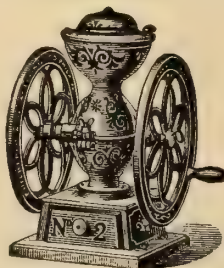
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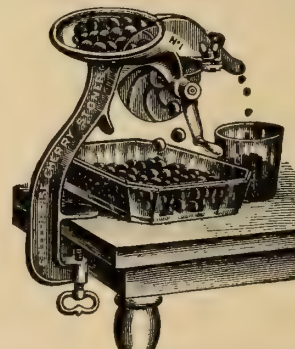
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 Maxwell, David, & Sons, St. Marys, Ont.  
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 Pink, Thomas, Pembroke.  
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**Lye.**

Gillett, E. W., Co., Limited, Toronto.

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 Fairbanks Co., Montreal and Toronto.  
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 Ontario Wind Engine and Pump Co., Toronto.  
 Penberthy Injector Co., Windsor.

**Mantels.**

Batty Stove and Hardware Co., Toronto.

**Manufacturers' Agents.**

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 Phillip, David, Winnipeg.

**Metals.**

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 Canada Iron Furnace Co., Midland, Ont.  
 Canada Metal Co., Toronto.  
 Copeland & Co., Montreal.  
 Deseronto Iron Co., Deseronto, Ont.  
 Gibb, Alexander, Montreal.  
 Gilbertson, W., Pontardawe, Wales.  
 Hankin, F., Montreal.  
 Ironside, Son & Co., London, Eng.  
 Jackson, C. F., & Co., Vancouver, B.C.  
 Kemp Mfg. Co., Toronto.  
 Leslie, A. C., & Co., Montreal.  
 London Rolling Mills Co., London, Ont.  
 Lysaght, John, Bristol, Eng.  
 Morton, B. K., & Co., Sheffield, Eng.  
 Nova Scotia Steel and Coal Co., New Glasgow, N.S.  
 Peck Rolling Mills, Montreal.  
 Rogers, Henry, Sons & Co., Montreal.  
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 Dods, P. D., & Co., Montreal.  
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 Lucas, John, & Co., Philadelphia, Pa.  
 Luxfer Prism Co., Toronto.  
 McArthur, Corneille & Co., Montreal.  
 McCaskill, Dougall & Co., Montreal.  
 Merrick, Anderson & Co., Winnipeg.  
 Nobles & Hoare, London, Eng.  
 Queen City Oil Co., Toronto.  
 Ramsay & Son, Montreal.  
 Sherwin-Williams Co., Montreal.  
 Standard Paint and Varnish Works, Windsor, Ont.  
 Thorne, R. E., Montreal.  
 Winnipeg Paint & Glass Co., Winnipeg.

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Cullen, Orlan Clyde, Washington, D.C.

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Hanover Portland Cement Co., Hanover, Ont.  
 Hyde, F., & Co., Montreal.  
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Davidson, Thos., Mfg. Co., Montreal.

**Registers.**

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 Jenking, A. C., Montreal.  
 McArthur, Alex., & Co., Montreal.  
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 Metallic Roofing Co., Toronto.  
 Ormsby, A. B., & Co., Toronto.  
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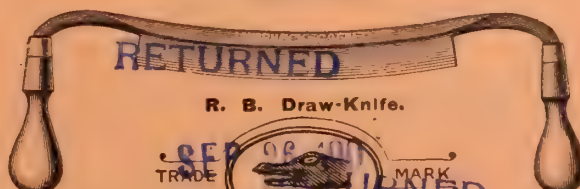
Soc. Firmer Chisel, Bevel Edge.



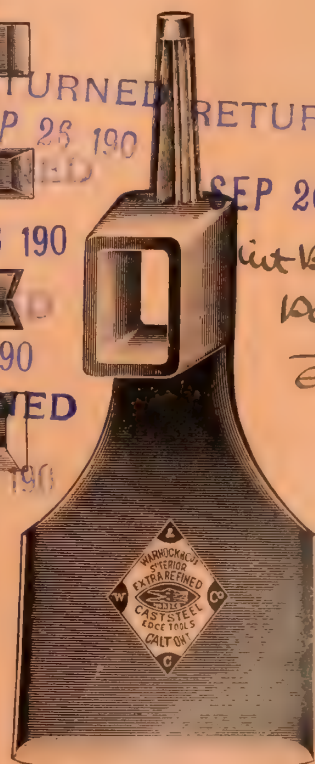
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A Weekly Newspaper devoted to the Hardware, Metal, Machinery,  
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VOL. XVI.

MONTREAL AND TORONTO, AUGUST 20, 1904.

NO. 34

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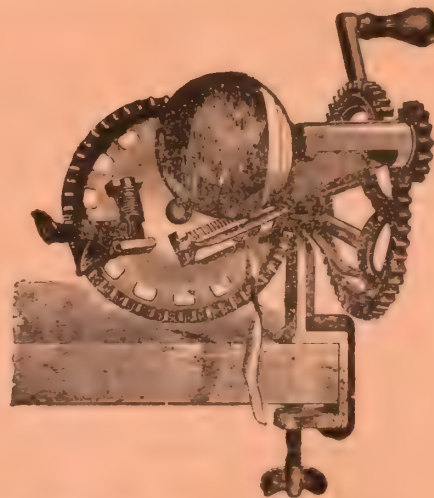
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No. 1445B—Cylinder Lock,  $6\frac{1}{4} \times 4$ .  
 No. 5250 & 5251—Knobs,  $2\frac{1}{2} \times 2\frac{1}{4}$ .  
 No. 5252—Rose and Escutcheon,  $10 \times 3$  inch.  
 No. 5252 $\frac{1}{4}$ —Rose and Escutcheon,  $8\frac{1}{2} \times 2\frac{1}{4}$ .



SET No. S253.

No. 785B—Lock,  $3\frac{3}{4} \times 3\frac{1}{4}$ .  
 No. 5251—Knob,  $2\frac{1}{4}$  inch.  
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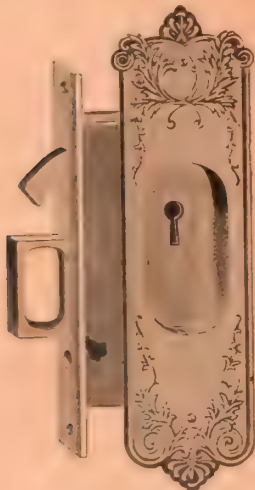
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SET No. S250.

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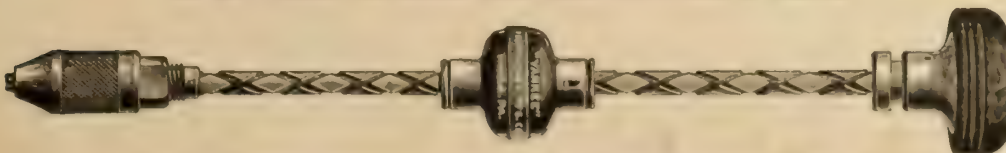
No. 15. "Yankee" Ratchet Screw Driver, with Finger Turn on Blade.



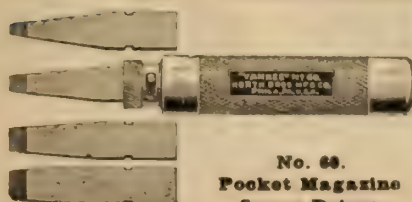
No. 30 "Yankee" Spiral-Ratchet Screw Driver, Right and Left Hand.



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 Cutter. It makes her work  
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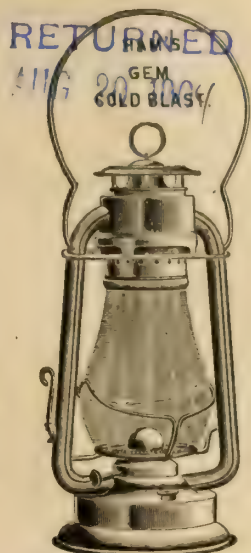


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Defiance Cold Blast,  
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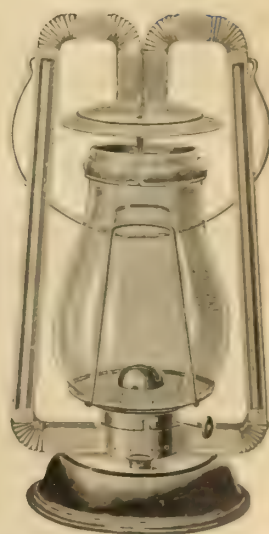
Cadet, brass, 7-in. high, 1 1/2 in. wick.

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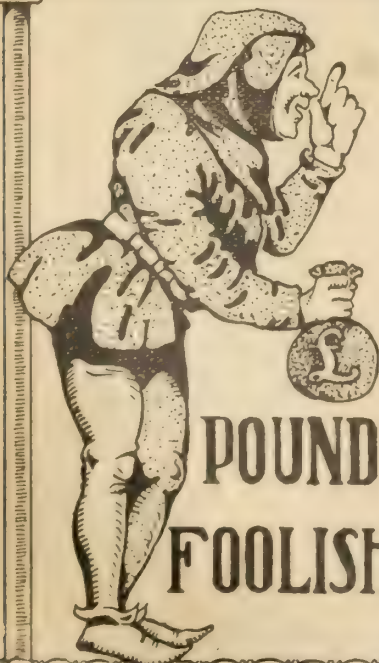
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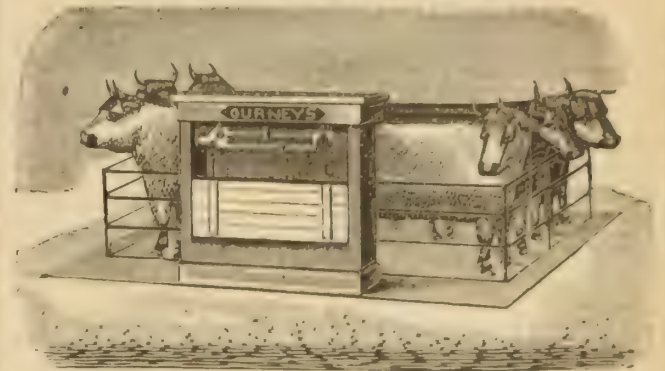
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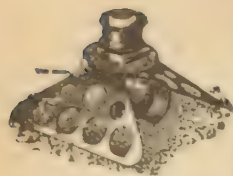
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Manufactured by

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**PULLMAN MFG. CO.**  
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Ask for our Catalogue and Quotations.



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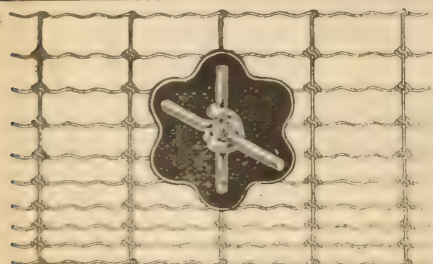
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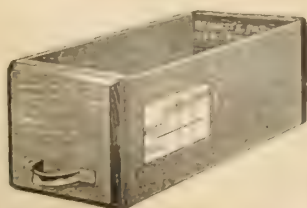
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Sole agents for Man. and N.W.T.

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May be used either for case  
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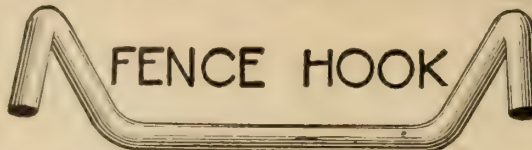
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STRONGEST TRAPS MADE. PRICES EXACTLY RIGHT.

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THE HINGE IS COMPLETE, AND  
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CAVERHILL, LEARMONT & CO., Agents  
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Manufactured and sold by  
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**C**ordage

**O**f every description.

**N**et Mountings,

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**C**ore Rope,

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**D**angerous to use Inferior Cordage.

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**BEST GOODS** **RIGHT PRICES**  
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PRICE is a good thing,—but,  
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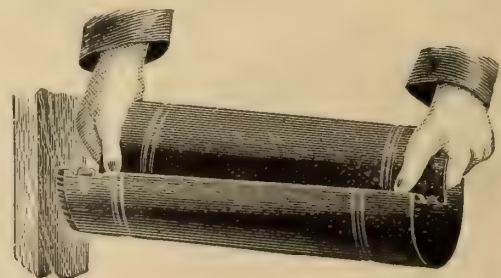
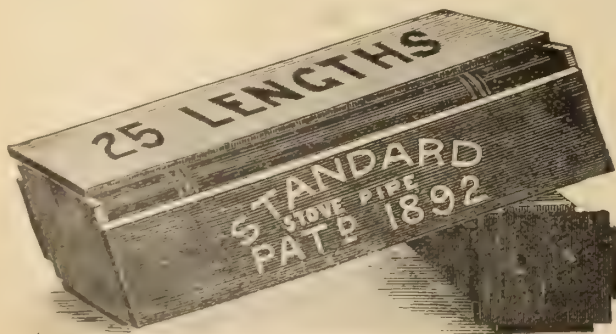
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 Uniform in size, securing a perfect fit.



We carry in stock a full line of metals, comprising Canada Plate, Galvanized Iron and Black Sheets, also Tinplate, etc., which we are at all times prepared to supply at lowest market prices.

**KEMP MANUFACTURING CO., TORONTO, Canada**



## The Retail Hardware Trade in the West

Some Impressions of a Short Visit by the Editor.

**L**ARGE stocks and long credits seem to be the rule in the hardware retail stores of Manitoba and the Territories. A visitor from the east, examining in detail the average hardware stock west of Winnipeg, would not fail to notice in the first few moments the heavy stocks of practically all lines, especially when one considers in comparison the stocks carried in eastern retail stores.

Ammunition is bought in ton lots, binder twine, cements, etc., in car lots, lanterns by the gross, and so on all along the line. One firm less than two years old, in a town of about six thousand, installed thirty furnaces last year, and expects to install forty this year, besides contracts for four or five hot water heating in residences. This firm keeps employed from six to eight men in the tinshop and on heating work. In a village of about 100 population a hardware store, only two years old, now carries over \$12,000 stock, including lumber and implements. In another



J. B. Curran, Brandon  
1st Vice-President, Manitoba Branch, Western  
Hardware Association

town, Portage la Prairie, are three hardware stores with aggregate stock probably 50 per cent. larger than would be carried in an Ontario town of similar size.

One cause of these large stocks is the saving effected in freight by buying in large quantities, enough at a time to last through a season. Another reason is the credit system. The general custom seems to be to allow the farmers to run their accounts till after threshing, November 1 being accepted in many cases as settling up day. When the farmers are assured of good, or even fair, crops they buy as freely as if they had the cash in hand. Thus, the retailer, knowing he will not probably get a big proportion of his money before November 1, finds it just as advantageous to buy seldom and in large quantities as to buy often in small quantities. There is no advantage, they explain, in buying staple hardware lines at short intervals when the cash to pay for it does not come in till the season is practically over.

Another reason for large, well-assorted stocks is the exceptional increases in business from year to year. The heavy immigration and the recent good crops had lead to an era of building activity throughout the west, which means a great deal to the hardware trade. Builders' tools and supplies of all kinds; threshermen's supplies; household furnishings from a stove and a galvanized water tank to a carpet sweeper and an assortment of cutlery and silverware, have been needed in a volume only understood by those who have seen the building activity throughout the province, from the cross-roads hamlets to the City of Winnipeg, and who have got a proper conception of the increase in wheat and oat acreage in the past few years. This year there is, too, a demand in many parts of the west for guns and ammunition, such as eastern hardware merchants would never anticipate. 'All along the railway from Winnipeg to Regina wild duck could be seen. Yet to appreciate their numbers one has to get off the train and walk to one of the hundreds of little lakes of "coulees" and see the myriads of ducks swimming idly around "waiting," as a hardware clerk explained to the writer, "for the 25th inst., when the 'open season' begins."

In some parts of the province shooting contests are being arranged for the first day of "open season." Sides are chosen

and the party start out for the haunts of the wild fowl. The fact that in some cases each contestant is "limited" to 25 ducks, gives one a conception of the extent of the demand for guns and am-



G. Silvester, Elkhorn.  
2nd Vice-President, Manitoba Branch, Western  
Hardware Association.

munition in anticipation of this season. Hunters' coats, vests, decoy ducks, etc., also form an important feature of this demand.

...

The plumbing and heating trade of the west is done almost exclusively by the hardware trade. Even in large centres like Regina, where a municipal waterworks and electric plant are being installed, the hardwaremen do the business, employing experienced men to look after this work. Canadian manufacturers of plumbing goods do not get as big a proportion of this trade as they probably would if they were capable of supplying the goods and gave the west a little more attention. Canadian radiators and furnaces, however, are almost exclusively used, manufacturers of these lines covering the west systematically and thoroughly.

For stoves and ranges there is an exceptionally good demand, and practically every Ontario manufacturer is represented in the west. The heavy, large sized



stoves seem in greater favor, this being due in large measure to the fact that at certain seasons of the year the western farmer has in his service a large number of men, and a great deal of cooking has to be done. A feature of the situation in this line is the number of steel ranges imported from the United States. In



**E. H. Johnson, Brandon.**  
Treasurer, Manitoba Branch, Western Hardware Association.

more than a dozen stores the writer found not one hardware dealer but had from one to three styles of steel ranges from the United States. And, without exception, these retailers stated that they had never been offered a Canadian range of equal quality and price to the imported. It is surely "up to" the Canadian stove manufacturers to remedy this state of affairs. They have reasoned for some years against the steel range, but any impartial visitor could not fail of conviction that the latter has "made good" and is bound to continue in demand. No protective tariff can be depended on to divert demand from the steel range to the cast-iron range; so the sooner the leading Canadian manufacturers turn their attention to steel ranges, with the purpose of making a line to supplant the imported one, the better for themselves.

Generally speaking, however, Canadian manufacturers have no reason for complaint as to the proportion of business coming to them from the Northwest. In shelf hardware, paints, building supplies, tinware and enamelware, they get a big share of the trade, though in many lines special qualities are imported, most of this coming from the United States.

Apropos of enamelware, many readers of Hardware and Metal will remember the incident in the Dominion House known as the "tea pot episode," when R. L. Borden, leader of the Opposition, after a tour of the Northwest, showed his fellow members in the House an imported tea pot which was being imported "to the disadvantage of Canadian workmen." Leader Borden probably did not so intend it, but hardwaremen of the west state that the incident proved one of the strongest advertisements this ware has ever had. In any case it is now to be found in almost every hardware store in the west. There is no danger of it ever supplanting the Canadian article, as it is a special line and so is more costly than the Canadian ware and than the average buyer feels like paying. But it is a well advertised tea pot.

\* \* \*

Window dressing and store arrangement have been studied to some purpose by many of the western hardware retailers. At the present threshermen's supplies and carpenters' tools, which have been the vogue for some weeks, are being supplanted by sportsmen's supplies—and fascinating displays are the result.

Lamps and silverware are shown by practically all the trade in the west in such a way as to add to the attractiveness of the store and, at the best seasons, to increase the volume of business very materially.

\* \* \*

Stock foods have during the last year or two been added by many hardwaremen. Some retailers have been handling them for some time, and have found them a most satisfactory line.

The amount of tinsmithing done, as may be gathered from the introductory remarks is usual. Furnace work and the manufacture of galvanized iron tanks are the most important work done, but eavetroughing and cornice work runs into large totals in a season. In this connection is a serious problem of the western retailer. Tinsmiths, either competent or incompetent, are scarce, though \$3 a day will be paid to good men in the small villages. There is a shortage of tinsmiths which, when Winter is setting in and much work remains to be done, is a serious matter to householders as well as to the merchants.

#### **STOCK IN HAND.**

The Hoffman Corr Mfg. Co., 118 Bay street, Toronto, have a specially large stock of oakum and lath yarn on hand at the present time. They will be willing to sell this at a very low price.

#### **COMMERCIAL TRAVELING IN CANADA.\***

Special to the Birmingham Daily Post.

FOR several years past Canada has loomed large upon the horizon of commerce. Such glowing accounts of its prosperity have reached this country that the most sceptical of British manufacturers have been awakened to the existence of the great Dominion in the far Northwest. As a result, the last six months or so have witnessed an irruption of British commercial travelers into the colony in numbers—so I have been assured—far greater than have ever before been known. I myself was one of this crowd, and, as anything that can add to the general knowledge of the conditions of traveling in Canada is of special interest just now. I propose to give a resume of my experiences, pro bono publico. It is perhaps pardonable to state that, although new to Canada, I am an old hand "on the road," with an experience that embraces nearly every European country. I am, moreover, perfectly familiar with the goods I have to sell. My impressions, therefore, are not those of a novice; nor are my experiences those of that other very common type in Canada—the commercial adventurer, who has scraped to-



**T. J. Agnew, Prince Albert.**  
Member of the Executive, Western Retail Hardware and Stove Dealers' Association.

gether a few scratch agencies in goods he has never handled before.

It was with high hopes and no small

\*Mr. P. B. Ball, Canadian Commercial Agent at Birmingham, Eng., will reply to this article in next week's issue of Hardware and Metal.



expectations that I set out for these fresh fields and pastures new. If I did not indulge the vision of a virgin soil, unfurrowed, as yet, by the plough of the British commercial, at least I felt reasonably sure that I would find a people well-disposed towards English goods—a people alert to see the merits of a new idea, keen to appreciate freshness of design, able to discriminate between the substantially and the flashily made articles, and, above all, a people who, when they bought at all, would buy largely. Alas that I should have to record it, but the truth must prevail! one after another I came to see these illusions shattered. And I have amply convinced myself that my experiences were not exceptional. I have compared notes with some dozens of other travelers, like myself, on their first journeys to Canada, but none did I meet whose verdict differed materially from my own.

#### One Fond Belief Gone.

First, to take the predilection for English goods, which we at home suppose to be the hall-mark of the loyal Canadian. This fond belief must go the way of other false faiths. In Canada, as elsewhere, patriotism stops short at the pocket. Whatever of patriotic sentiment the Canadian permits to enter into his business philosophy takes the formula of "Canada for the Canadians," and he is a supporter of home industries first and foremost. True, in next degree, his loyal feelings to the Old Country prompt him—all other things being equal—to favor England as against the foreigner; the preferential tariff is the token thereof. But in his tastes, in his habits, in the ordering of his mode of life, his leaning is all towards America. Alike in the furnishing of the dwelling house, in the plant of the factory, or the equipment of the hotel, in the system of railways, sanitation, lighting, street traffic, even in sport, Canada follows the lead of the United States. It is the inexorable gravitation of the lesser body to the larger. Not only so, but the operation of the natural law has been helped forward by the long neglect of the colony by the Mother Country, till the wonder is that it has not sapped the political allegiance as well. When remonstrated with upon this condition of things, the Canadian rejoins—not without good reason on his side—that it is only of quite recent years that England has deigned, either in politics or in commerce, to cultivate the Canadian connection. Thus it is that the American influence is the most serious ob-

stacle the British manufacturer has to fight in the belated bid which he is now making for the trade of Canada.

In ornamental or decorative goods—such as jewelry, plated goods, art metal ware, lamps, glass, crockery—it is the American taste that has to be catered for, and the trend of that taste is to the light and the flashy, as opposed to the plainer, better finished article that is usually characteristic of British make. In ironmongery, in cabinet and builders' brassfoundry, in heating or cooking apparatus, in electric light, plumbers' or sanitary fittings one has to meet the keen price-competition of the Americans and their, in many cases, cleverer patents and handier notions. But, even where these do not debar, one still has to reckon with American ideas and ways in matters culinary or furnishing; one still has to conform to American standards and regulations, which the Canadians everywhere blindly adopt. Even in the domain of sport it is the same tale: baseball, not cricket, is the national game of Canada; the "buggy," not the dogcart, is the popular turnout; cycling is practised only by masses as distinguished from the classes; the machines ridden are of the flimmiest Yankee type, and Yankee go-as-you-please ideas, which prevail equally in Canada, dispense with all such superfluous accessories as bells, brakes, or lamps. In hats, hosiery, and "footwear" one does not need to be in the trade to see slavishly the Canadian copies his Yankee cousin.

#### About Preferential Tariffs.

"Oh, but," says your Englishman, "we have now got the preferential tariff." It is not generally known at home—or, if known, it is but imperfectly realized—how little that preference counts for in the fight. It may be well, therefore, to state that, although it is a rebate of one-third of the usual duty, it amounts only to 10 per cent. upon the value of manufactured articles, which, for the most part, are subject to a duty of 30 per cent. In other words, while the American article pays the full duty, the British gets in for 20 per cent. net. It is but a little start which we thus get in the trade handicap, and such as it is it is neutralised by the proximity of the great manufacturing districts of New England and Pennsylvania.

In raw materials or in bulk goods it may sometimes be sufficient to turn the scale. But I am here concerned for manufactured articles, such as are the staple production of Birmingham and

the Midlands, and in these a difference to the consumer of a shilling in the half-sovereign is all too small to counteract against ingrained habit, taste, or custom.

Thus it comes to pass that a man may take to Canada the goods of any of our most celebrated English makers; these goods may be excellent in design, faultless in finish, right in price; but, if they are a departure from the American style and taste prevailing in the Dominion, he will find no market for them. This happened to myself with two separate and distinct, but most widely known, English makes, which sell not only in Great Britain and in at least one British colony, but all over the Continent of Europe besides.

Nor is the difficulty of introducing new makes confined only to cases of being "up against" America. I have never found a people so hard to win over to a new idea as the Canadians. This constituted the greatest surprise of my tour, being, I confess, the very antithesis of what I had expected. I had with me one line of goods that was absolutely a new creation—a departure from anything that has hitherto been made in that particular line, the nature of which I am not at liberty to indicate. Earlier in the year I had taken a journey with these goods through the greater part of the Continent of Europe, where they had been readily, even eagerly, bought all along the line. In Canada I could get no one to take them up. "There was no 'call' for such goods," I was told. Similarly it fared with a number of household patents I was carrying, goods that are in regular demand at home and on the Continent. There was nothing in the nature of these articles to render them inapplicable to or unsuitable for Canadian requirements. But they were new, and as yet had not been "called for." Hence it was next to an impossibility for me to awaken interest in them. And these are the people who are incessantly dinning it into the ears of the slow-going old Britisher that they are always "right in front of time."

The reason for this extraordinary lack of interest in new goods—as distinguished from eagerness after cheap-jerk "novelties"—is, in my opinion, to be sought in the fact that in Canada the private firm scarcely exists at all. Alike amongst the retail "store" and the wholesale "jobbers," the trade is in the hands of limited companies to a far greater extent than is the case in Europe. The result is that the traveler



comes little into contact with the heads of firms, but has to do almost entirely with the departmental buyers. For the most part these are very young men—much too young, according to our old-fashioned English notions, though, in his own estimation, there is no Canadian of five-and-twenty Summers who is not capable of managing anything on earth. Paradoxical as it may sound, their very youth is antagonistic to the new idea. Lacking the stimulus of the competition of a few first-class private firms, these departmental buyers run pretty much all in the same groove. Their trade horizon is limited to what they know will sell, and, being answerable for the success of their departments, they are “taking no risks.” “Fryingpans are ‘called for,’” they say; “therefore show us fryingpans, and we will go into your prices; but do not bother us with an article that is to supersede the fryingpan, and which we should have all the trouble of introducing to the public.” Give them regular goods to handle, and they will expend themselves in clasp-trap “ads,” in trade puffs, and in the cutting of prices. Therein lies the chief element of Canadian business “smartness.”

#### Canadians Slow as Customers.

My next indictment will touch the Canadian “on the raw.” There is probably no charge he would more vehemently resent than that of being “slow.” “You English are so slow,” they never tire of telling you. Yet, as buyers, of all the peoples I have ever had to do with, the Canadians are the slowest. Not in coming to see your samples—that they do with alacrity; curiosity being the motive power. But afterwards, even when the customer has decided to give you an order, you may prepare for a period of exasperating delay before you can get him to make it up. This is especially the case with the young man buyer I have spoken of. He takes no account of time—that is, of your time—to which he helps himself with all the easy assurance of the young man in a young country. It may be that you have to do with more than one department in a store. If so, you are in a bad case, for each departmental order has to go through a highly-elaborated routine system; each individual buyer will procrastinate in turn, and the traveler may be kept hanging about interminably before he is “through” with the firm. My own experience in this direction convinced me that for the despatch of business the time-honored methods of the British War Office are rapid and up-

to-date compared with a Canadian “store.” When you do get your order it will probably be woefully out of focus with the scale of business which you have seen in the habit of associating with all things American. For your Canadian, being so far in front of time, has always got his stock “laid down” for about eighteen months ahead. At least this is what he tells you. And although he handles so-and-so-many thousand dollars’ worth of this or that particular class of goods per annum just now he can only manage to squeeze a little lot of your goods to see how they “catch on.” It is the old story, only one hardly expected to hear it in the New World.

It is only fair to state—and the fact is an interesting one—that these characteristics of the Canadian business man go hand-in-hand with a great affability of manner. Accessibility is another of his good points. The traveler on his first journey has no difficulty in getting to see the heads of firms or of departments, at practically any time in ordinary business hours. This is due in a large measure to the Canadian’s native geniality, for I have nowhere suggested that he is not a “good fellow.” It is also due to his adoption of the American business principle—which we English might also copy with advantage—of seeing everybody, so as to be sure of missing no one. But these very virtues are akin to those of the pleasant-mannered dentist. Myself, I am old enough to have become case-hardened. But many a bright young Englishman did I meet, enchanted, on his first calls, with the cordiality of his reception, only to find him afterwards disgusted and dejected in inverse ratio with the subsequent disillusionment.

#### Some Reflections.

The abounding prosperity of the Dominion cannot be gainsaid, and that there are trades in which big and regular business is done by English firms need not be stated. That such trades and their representatives are subject in much lesser degree to the conditions I have described also goes without saying. Which and what these trades are it is not my province to indicate. I am merely offering a gratuitous guidebook to such English firms as may contemplate opening up trade relations there, and am giving them some idea of what they may expect. I have endeavored to show that the British manufacturer has a lot of leeway to make good before he can catch up with the American. Canadian

trade is not, as some fondly imagine, an over-ripe apple ready to fall into any British maw that chooses to open for it. For firms unknown out there—though their names be household words at home—it is an uphill fight all the way. Nor need English houses hope to win their way by reason of being “old established.” Age does not command respect with the Canadian; he at once begins to talk of “cobwebs.” The story goes of a store in a Canadian city, while, having enjoyed a long monopoly was suddenly confronted with a opposition shop. “Established over 100 years” the old firm put over its doorway with conscious pride. “Established last week but come to stop 100 years” read the signboard which the new-comer promptly stuck up in reply. And there is no doubt which of the two would appeal the more successfully to Canadian sentiment.

I know no country in the world where traveling is so expensive. If a man takes samples with him he will have to plank down one-fifth of their value before he can open out at all. Duty is charged, too, on his traveling cases or baskets, at the arbitrary valuation of the customs officials. None of this duty is recoverable when he leaves the country. This is an exaction which is not practised by the most arbitrary of European Governments; it is not “fiscal policy,” it is sheer blackmail, and should be strenuously taken up by the English Chambers of Commerce. The distances in Canada are enormous, and the freight traffic both slow and uncertain. Consequently the traveler must always despatch his cases by “express” at very heavy cost. Hotels are excellent but high-priced. One misses the handy English “boots,” or the Continental “commissionaire,” to do little odd jobs. All small services must be dispensed with or paid for at exorbitant rates. There are no outside porters to take one’s cases to a customer; these

## WIRE NAILS TACKS WIRE

Prompt Shipment

**The ONTARIO TACK CO.**  
Limited  
HAMILTON, ONT.



must be sent and fetched by a "transfer company" at a cost of a "quarter" (one shilling) per package each way. And so on, through the whole gamut of petty expenses—from the "shoe-shine" at 10 cents (5d.) a time to the cab at 21-2 dollars for a ten-minutes' drive. In short, the intending traveler must be prepared to pay a dollar for every shilling he would spend at home. If he has the feeling that he is only getting value for the shilling, he may console himself with the thought that he is taking out the balance in "experience."

#### CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

#### Cutting-off Machines.

THE Newton Machine Tool Works, Philadelphia, have just got out a catalogue illustrating and describing their cold saw cutting-off machines. All the machines are well illustrated and a short description of each given. Those of particular interest are the Combination, the steel foundry and armor plate cutting-off machines. The combination machine is adapted to the widest range of work, including round and square stock, I-beams, channel bars, etc. The Steel Foundry machine is designed for cutting off gates or risers on steel castings. On this class of work it is necessary that the saw be idle when being withdrawn from the cut. This is obtained by having separate counter-shafts, one for driving the blade, and one for quick movement to spindle head. In the Armor Plate cutting-off machine the carriage has three changes of positive gear feed and power quick movement in either direction by means of spiral pinion and rack.

#### Radium Gas Stoves.

In their 1904-05 catalogue the Radium Stove Co., Columbus O., describe and illustrate the only base heating gas stove made, the Radium. One of the illustrations gives a sectional view of the stove showing the method of producing a base heating gas stove. The cold air enters at the bottom of a large central drum, travels upward through the porous fuel into the air-tight top. The course from there is down the front corner tubes into the air-tight base, after circulating which, it travels up the back

# FLOOR FINISHES

## A Special Notice to S. W. P. Agents

We have just begun a special fall advertising campaign on *Sherwin-Williams Floor Finishes*. We intend to make the line as well known as S. W. P.

We purpose placing the merits of each one of *Sherwin-Williams Floor Finishes* before the property owners of the Dominion in a way that is sure to build up their sales in every locality. We have prepared an advertising feature for this purpose that is undoubtedly by far the strongest floor finish advertising ever sent out.

We want to tell you about the entire plan in detail. Write us and we shall give you full particulars by return mail.

With *Sherwin-Williams Floor Finishes* in stock you can meet every floor finish demand in your territory with the best floor finish made.



**THE SHERWIN-WILLIAMS Co.**

PAINT AND VARNISH MAKERS

CANADIAN HEADQUARTERS AND PLANT:

21 St. Antoine Street, Montreal

WAREHOUSES: 86 York St., Toronto;

147 Bannatyne St., East, Winnipeg



corner tubes into the rear-compartment of the top and passes into the flue. Readers of *Hardware and Metal* may secure this upon application.

#### C. Klopfer.

C. Klopfer, Toronto and Guelph, has just issued a catalogue of carriage and wagon builders' supplies. This is the first catalogue issued, and is in every way complete. The catalogue is 5x8 inches and contains 327 pages. The lines of goods presented embrace all standard, material, tools, etc., required by the trade generally. Price lists are supplied in every case. The catalogue contains an index.

#### Canadian Westinghouse Co.

The Canadian Westinghouse Co., Limited, Hamilton, are sending out a little booklet describing and illustrating alter-

nating current fan motors. This should be of great interest to hardwaremen handling electrical supplies. They are also sending out a leaflet describing their direct current motors for fans and also a folder on lightning arresters which should also prove of great interest to those handling electrical supplies.

#### The Buckeye Engine.

The Buckeye Engine Co., Salem, O., are sending out a very handsome catalogue illustrative and descriptive of the Buckeye Engine. This catalogue is 10x7 inches and contains 125 pages. The whole get-up of the catalogue is very high grade. This firm was established in 1847, and the first engine built by them was of the throttling type, and one page of the catalogue is devoted to the illustration of the evolution of the steam engine in these works. The first thirty pages are devoted to the horizontal types



of engines, while the next fourteen are devoted to the vertical. Then follow detail illustrations of different parts. This constitutes the first part of the catalogue. The second part is devoted to a description of the general advantages of the Buckeye engine. This last is divided off into two sections, simple and compound engines.

This catalogue is a very complete affair, and those contemplating making steam engine installations would do well to secure one from the Buckeye Engine Co.

#### Gas Ranges.

Hardware and Metal has just received from the Peerless Stove and Range Co. their 1904 catalogue of gas ranges and hot plates. The ranges are well illustrated and the descriptions are concise and to the point. The "Peerless" range for natural gas is illustrated and described in detail. Readers of Hardware and Metal may secure this upon application.

#### O. D. Transformers.

Hardware and Metal has received from the Canadian Westinghouse Co., Limited, circular No. 1057, illustrative of their O. D. Transformers. These transformers are illustrated and described in detail. It is a 23-page circular. This company has had eighteen years' experience in the manufacture of transformers, and while new and valuable features have been added to their style of transformers from time to time, no radical change has been made. Their energies have been devoted to the production of a standard type, and in the O. D. they claim to have one that can be relied upon for all general service.

#### Air Compressors.

Hardware and Metal has received from the Blaisdell Machinery Co., Bradford, Penn., bulletin 12, devoted to self-oiling air compressors. On the fourth page of the catalogue is a line cut showing the general design of the Blaisdell self-oiling air compressor, and that is followed by 8 pages of illustrations and descriptions of the detail parts. These detail descriptions are very clear and are entertaining. The last part of the catalogue is devoted to the illustrating and specifications of the different classes of compressors. Among those illustrated are steam driven single and two stage compression, belt driven, single and two-

**THE SUPERIORITY OF**

# Iver Johnson Revolvers

**P**rotects a good name and perpetuates a long - established reputation.

Widely advertised—widely known—widely sold.

**SEND FOR IVER-JOHNSON LITERATURE,  
IT IS EDUCATIONAL AND INTERESTING.**



**New York Office:**  
No. 99 Chambers St.

**IVER JOHNSON'S ARMS & CYCLE WORKS,**  
FITCHBURG, MASS.

stage compression, and motor driven, single and two-stage compression.

brake pump regulator, gravity pump governor, water reducing valve and the Mason improved steam pump.

#### Steam Appliances.

The Mason Regulator Co., Boston, Mass., have sent out a small catalogue and price list of steam regulating devices and steam pumps. The illustrations are explanatory in nature and the accompanying descriptions are very complete. Among the devices illustrated are the hydraulic damper regulator, locomotive reducing valve, ordinary reducing valve, pump pressure regulator,

#### A NEW CREATION.

The Utica Drop Forge and Tool Co., Utica, N.Y., are putting upon the market something new in the way of renewable jawed end nippers, No. 260, of which an illustration is given. These are made in sizes 8-inch, 10-inch and 12-inch. The frames are made of a high grade cast steel, and the jaws of the finest tool steel. Prices and descriptions



New Remarkable Jawed End Nipper.

automatic belt shifter, balanced valve, lever valve, pump governor, elevator pump pressure regulator, by-pass or water relief valve, rheostat regulator,

will be furnished to the trade by the Utica Drop Forge and Tool Co., or by the Smith & Hemenway Co., 296 Broadway, N.Y.



# H. S. HOWLAND, SONS & CO. LIMITED

TEMPORARY WAREHOUSE:

Wholesale  
only

212-218 COWAN AVENUE, TORONTO.

Only  
wholesale

Sample Room at 21 SCOTT STREET, Telephone Main 4056.

Telephone:—Office, Park 1584.

(Where orders may be left if not convenient to visit our Warehouse at Parkdale.)

Telephone:—Warehouse, Park 1585

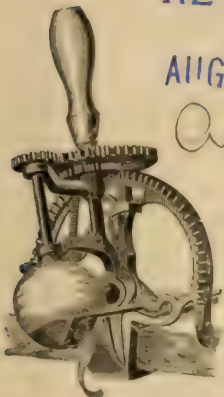
## APPLE PARERS

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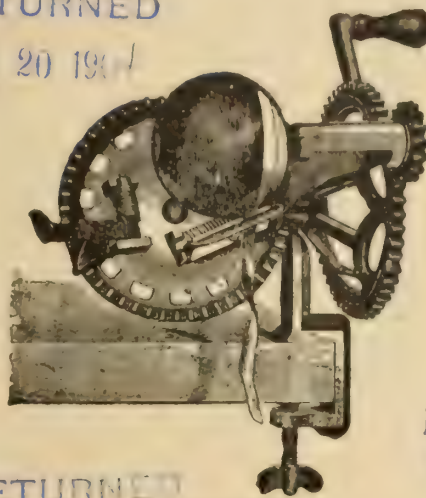
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*Out Book 22  
Page 60*



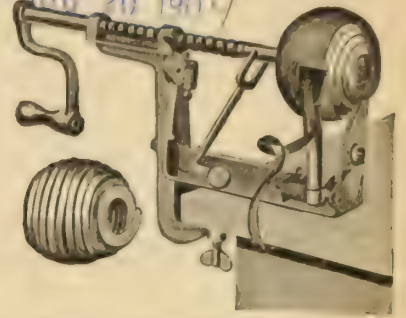
NEW LIGHTNING



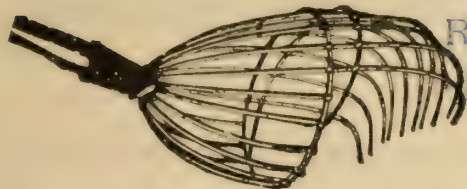
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"LITTLE STAR"



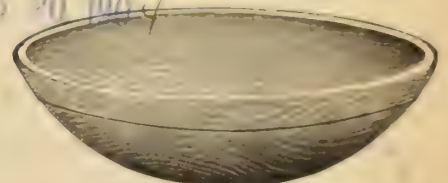
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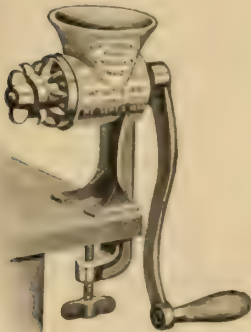


CHOPPING BOWL

## MEAT CHOPPERS

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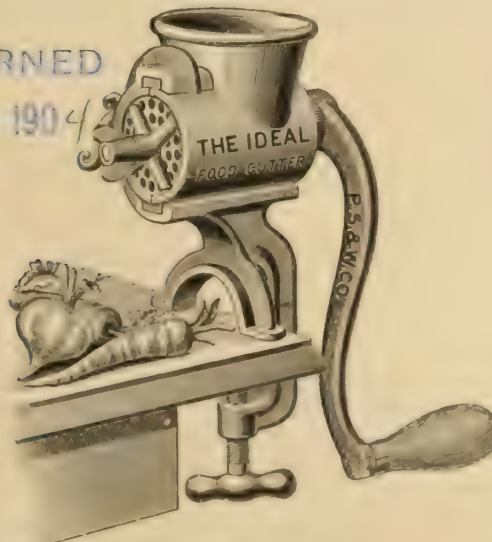
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"UNIVERSAL"

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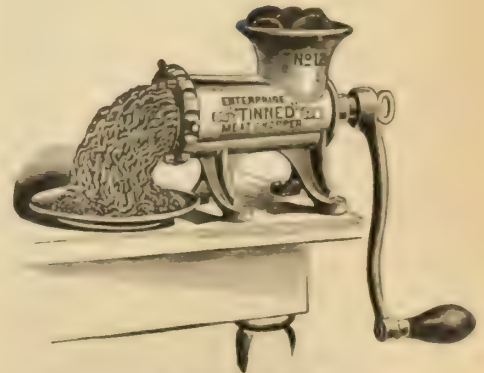
AUG 20 1904



"IDEAL"

RETURNED

AUG 20 1904



"ENTERPRISE"

For fuller particulars see our Hardware Catalogue.

## H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.

Factory: Dufferin Street, Toronto, Ont.

Our prices are right.



## SHINGLES

### We Have a Superior Kind

The construction of the locks, or the method of hooking the sheets together on a roof is where our "Safe Lock" Shingle is superior to other makes.

What is so strong as the testimony of others? We mail free our book of testimonials and references; also model sample and catalogue, if you will tell us size and pitch of your roof.

**THE METAL SHINGLE & SIDING CO., Limited,**  
Preston, Ont.

## SIDING

In Ornamental Patterns made from Steel Sheets is just what is wanted for dressing up old buildings or to use on new ones.

We have many designs to select from, including Trim-mings and Ornaments, and send free estimates and catalogue upon request. We can also supply Metal Roofing, Ceilings, etc.

**THE METAL SHINGLE & SIDING CO., Limited,**  
Preston, Ont.

## CEILINGS AND WALL FINISH IN METAL. . . .

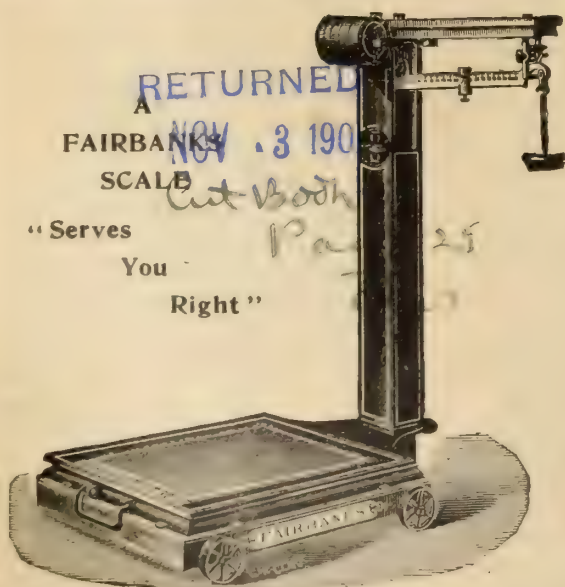
There is nothing to equal them — cost and utility being considered. Fire proof, everlasting, - sanitary - and - highly ornamental. . . . .

Can be applied without disturbing the plaster, and cost is not large. We have many patterns - to - select - from.

Send accurate size of room for free estimate and catalogue.

**THE METAL SHINGLE & SIDING CO., Limited,**  
Preston, Ont.

# THE SCALE THAT NEVER FAILS



IN ACCURACY IS THE SCALE  
IT PAYS TO BUY.

**Why Cheat Yourself**  
BY USING A "CHEAP JOHN" SCALE?

**A "Fairbanks Standard Scale"**

GIVES

**PERFECT SATISFACTION**

Send for Catalogue.

**THE FAIRBANKS COMPANY**

MONTREAL.

TORONTO.

WINNIPEG

VANCOUVER.



# MACHINERY

## MACHINERY MARKET.

### Quebec.

Office of HARDWARE AND METAL,  
232 McGill Street,  
Montreal, Aug. 18, 1904.

LARGER orders for machinery have been received this week than for some time past. The important machinery deal for railway shop equipment, mentioned in this column a couple of weeks ago, was closed a few days since. Several of the local dealers received a share of it, which totaled a considerable amount. Business is considerably brighter, although quiet in some quarters. More enquiries have been received than formerly, promising a larger volume of business for the near future. Machine tools are well up to the mark as they are moving well. Woodworking machinery has been placed during the week, and a few engine and boiler installations are under way. The electrical machinery market is fairly brisk, and manufacturers and dealers have a good many orders yet unfilled. There is every indication that business is now in a fair way to resume a normal state, or even better, after the dullness of the holiday season.

### Ontario.

Office of HARDWARE AND METAL,  
10 Front street east,  
Toronto, August 19, 1904.

THE enquiries which have been so much in evidence during the last month or so, are now beginning to materialize, and more actual business has been done this week than for some weeks past. Local dealers report that business is picking up well, and that several good orders have been closed.

Engines and boilers still seem to have the best demand, but planing mill machinery follows up closely. Machine tools also are quite prominent on the market.

### Circular Re-Saw.

The illustration shown herewith, is of a 24-inch circular re-saw such as is used

in sash and door, furniture, carriage, box and jobbing shops.

This machine embodies several new features. It carries a 24-inch taper ground saw, and will split 6-inch wide and 8-inch thick. It is a simple, strong and effective machine with four 6-inch feed rolls, all strongly geared, their pressure being given by a weight. One pair may be rigidly locked. A treadle enables one to instantly open the rolls for the removal of work. The feed may be started or stopped at will. To set for siding, loosen two handles, and tilt rolls by means of a screw to a stop, which gives the required bevel. The arbor and its boxes are adjustable to and from the rolls. To remove the saw it is only necessary to loosen two bolts,

### Machinery and Electrical Notes.

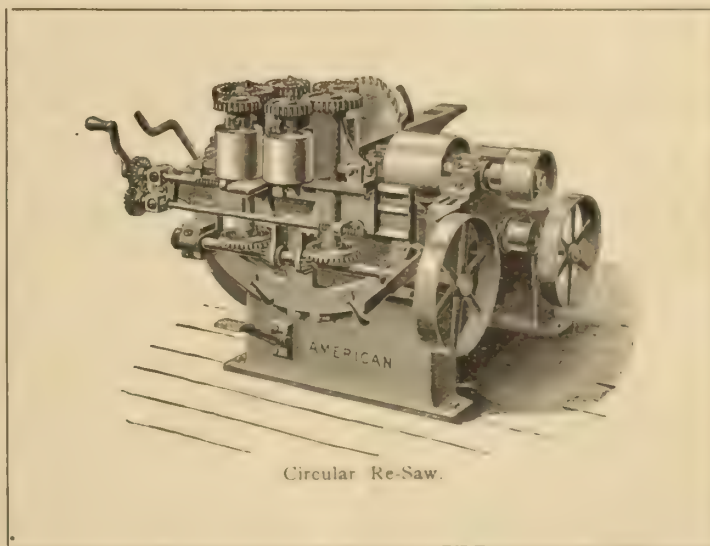
THE Toronto & Niagara Power Co. have commenced the erection of the steel towers to carry their wires from Niagara Falls to Toronto. They have started near Davenport road, just outside Toronto, and will continue from there along their right of way to Niagara. The distance is 56 miles, and the towers are to be placed every two or three hundred feet according to the general level of the country.

Wm. Graham, Sterling, Ont., is advertising his foundry for sale.

W. Kelehan, manufacturer of engines, Kingston, Ont., has had his shop damaged by an explosion.

H. W. Petrie, Toronto, has just closed an order for a complete saw mill outfit for J. B. Atchinson, Cornwall, Ont.

The Levy, Weston & McLean Machinery Co., Toronto, have disposed of a



Circular Re-Saw.

releasing a part of the table, which may then be removed. The under jointer and its pressure is very complete in its arrangements. A double attachment can also be applied which will joint both edges of material from 3-inch to 6-inch wide. With each machine is furnished one solid plate 24-inch saw, 13-8-inch hole. Pulley on arbor, 10-inch x 8-inch; speed, 1,630.

It is manufactured by the American Wood-Worker Machinery Co., who are represented in Canada by the Fairbanks Co.

complete planing mill outfit to S. George, Stouffville.

The Regina Planing Mill Co., Regina, N. W. T., have placed with the Levy, Weston & McLean Machinery Co., Toronto, a second order for a carload of planing mill machinery.

The F. A. Hallman Co., Toronto, are having a Jewel automatic engine and horizontal boiler installed by H. W. Petrie, Toronto, in their new factory on Booth avenue.

The Electrical Development Co., Niagara Falls, Ont., are having a power drilling machine installed by H. W. Petrie, Toronto. H. W. Petrie is also supplying the company a large chain tong.



## SYSTEM FOR RECORDING MACHINERY, ETC.

Continued from last issue

## TOOLS.

ALL tools constructed for the private use of any firm, and where made in large quantities, the recording of same has heretofore been one of the perplexing conditions connected with factory organizations. The following system has been adopted after

creating a good checking system when taking inventory. Upon completion of the order the original order is sent to the office by the foreman of the tool department. The cost is then made up and the card (duplicate) is then made to show the cost as shown under "Office Record," the tool construction account is then debited and "In Process" ac-

Tools Inventory

|          |                | Additions |       |       |      |       |      |      |      |     |       |     |     | Total Value |             |
|----------|----------------|-----------|-------|-------|------|-------|------|------|------|-----|-------|-----|-----|-------------|-------------|
| Shop No. | Style of Tool  | Value     | Jan'y | Feb'y | Mch. | Apr   | May  | June | July | Aug | Sept. | Oct | Nov | Dec         | Total Value |
| 3134     | 5 Piece Die    | 91.48     |       |       |      |       |      |      |      |     |       |     |     |             |             |
| 3135     | 5 . .          | 91.47     |       |       |      |       |      |      |      |     |       |     |     |             |             |
| 3136     | 21 Mule Fixt   |           |       | 20.00 |      |       | 1.75 |      |      |     |       |     |     |             |             |
| 3137     | 12 Drill Jig   |           |       |       | 5.75 |       |      |      |      |     |       |     |     |             |             |
| 3138     | 5 Blanking Die |           |       |       |      | 75.00 |      |      |      |     |       |     |     |             |             |
| 3139     | 12 Tapp Fix    |           |       |       |      |       | 3.75 |      |      |     |       |     |     |             |             |

Form X. O.-132.

repeated trials of many suggestions, and is now in a condition where watching the tools of the factory can be taken care of in the office and reference made rapidly by the card system. The office issues all orders for the construction of tools connected with the production of the factory. This order is herewith shown (O. F. 44). See last issue.

The original is a thin sheet with a blank back and the duplicate is a card, the front of which gives full particulars of the tool to be made and for what department; the back shows the data connected with the cost congregated.

The original order is sent to the foreman of the tool department and all time worked on the tool is charged against this order and all material is charged from the requisitions bearing this order number to this order. The factory expense is obtained from the different expenses charged against this department, the total of which is proportioned over

count credited. The card is then filed away numerically under the department number as represented by the card system. The order numbers on these cards are written up in a report each month and sent to the foreman of each depart-

|                                                                                                            |                 |                                 |                               |
|------------------------------------------------------------------------------------------------------------|-----------------|---------------------------------|-------------------------------|
| Order No.<br>B 634                                                                                         | For Dept.<br>32 | Account<br>Buildings & Fixtures | Date issued<br>Nov. 20, 1903. |
| To Carpenter.                                                                                              |                 | Dept. No. 2.                    |                               |
| Please execute the following order and carefully charge all material and labor to the above order number:- |                 |                                 |                               |
| 1 Rack 29 3/4" long 6" deep 24" high.                                                                      |                 |                                 |                               |
| 6 Partitions.                                                                                              |                 |                                 |                               |
| Quantity Finished 1.                                                                                       |                 | Date Completed Dec. 10, 1903.   |                               |
| Approved L. Lewis, Supt.                                                                                   |                 | Foreman C. Conde.               |                               |
| This order must be approved before commencing the work.                                                    |                 |                                 |                               |

Form XII. O.-132.

ment to check with the tools in his department. When a tool is discarded the office is notified immediately and the value of the tool at the time of its being discarded is then debited to the tool

and which is proved with the cards every month. Form 9 shows the collection of all tools used to produce a part complete of the machine being produced by the factory so that at a glance the cost of all tools against any one part can be instantly attained, also the comparisons of the cost of tools made to replace others of the same nature. When tools are bought from outside sources the next shop order number is specified on the requisition and is ordered stamped on the tool, thus carrying on the system so that no breaks occur in the running of the numbers. By prefixing the tool numbers with the letter T it is readily understood to stand for tools.

## FURNITURE AND FIXTURES.

The system herein shown may be used by commercial businesses as well as manufacturing—all cabinets, desks or portable racks, etc., are numbered by a metal tag. The tags as explained under the heading of machinery will answer the purpose. The numbers can commence from 100 up; it would be well to prefix the numbers with a certain letter thus giving the series a distinguishing feature. Where a concern has its own carpenters who are able to make their own cabinets, desks, racks, etc., the

order clerk issues an order, original and duplicate (Form O. F. 14.)

The original is of thin paper whilst the duplicate is in card form, thus enabling the order clerk to make the original and duplicate out at one writing. The original is sent to the foreman of the carpenters with a metal tag bearing the same number as the original of the order. The cost of building the required article is shown on the back of the duplicate.

The duplicate of the shop order is then filed away numerically under the department number in which the fixture is. If an addition is required to a desk, cabinet or rack, upon instruction from the office the carpenters charge time and material to the number already on the desk, cabinet or rack. The card bearing this number in the office is then opened and the additional value thereon recorded and from there to the book (Form O-132): under the month the addition was completed. Where a

Tool Construction Account

Carriage End "Left"

D-203

| Jigs         |                 | Punches & Dies |                   | Gauges       |       | Fixtures     |                   |
|--------------|-----------------|----------------|-------------------|--------------|-------|--------------|-------------------|
| 2193<br>D.S. | Drill<br>104.96 | 2552<br>D.S.   | Blanking<br>10.16 | 2501<br>D.S. | 15.74 | 2174<br>D.S. | Blanking<br>21.03 |
|              |                 | 1449<br>D.S.   | Piercing<br>10.45 |              |       | 2102<br>D.S. | Blanking<br>31.41 |
|              |                 | 3543<br>D.S.   | Drilling<br>14.00 |              |       |              |                   |
|              |                 | 2441<br>D.S.   | Blanking<br>18.02 |              |       |              |                   |

Form XI. D.-203.

the direct labor on all orders in the department by way of a percentage. Before the tool is hardened the number of the order upon which the tool was made is stamped into the tool with the name of the part the tool is to produce, this

expense account and tool construction account is credited, the expense being charged against the department last using the tool. Form O-132 shows the book used to collect the total additions to tool construction account each month



# The Waggoner Ladder Co., Limited

London, Ont.

RETURNED

AUG 20 1904

Attch 22  
822261  
Cuis



Eave troughing and painting are on; apple-picking will soon be here; storm windows come next; fire dangers are always looming.

Now is the time to get in a line of

## Waggoner Extension Ladders

These are not the lowest in price, but they are the best, and in ladders, above all things, the best is the cheapest.

We have also got the Canadian Rights, and are making the celebrated **Davis Clothes Reel** — the handiest, simplest and best clothes reel for the yard yet made. They are sellers.

Send for circulars and price list and discounts.

E. H. Briggs & Co., Winnipeg, are our Western Distributors, and H. L. and J. T. McGowan, St. John, N.B., handle our goods in New Brunswick.

See our exhibit as usual at the Toronto, Ottawa and St. John Exhibitions.

RETURNED

AUG 20 1904



## First Announcement

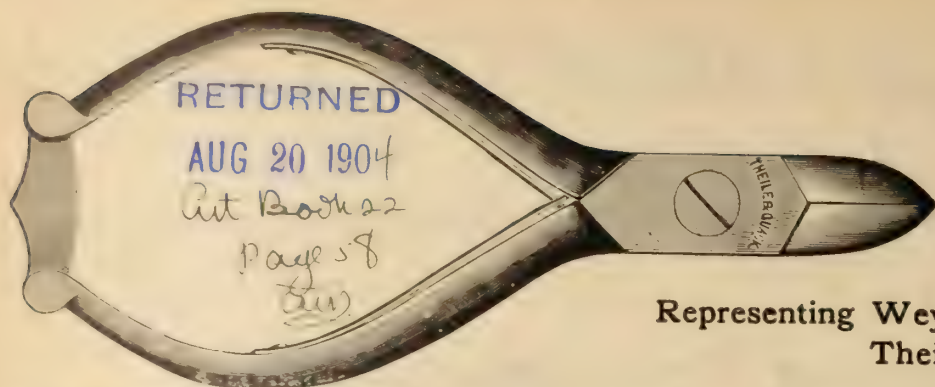


We are now in the market for your orders for sheet metal building material such as Metal Ceilings, Siding, Roofing, and everything in the line of Interior and Exterior Sheet Metal Work and Decoration. We have the newest and most artistic designs on the continent, and will be glad to have your specifications submitted to us for our figures.

**THE GALT ART METAL CO., Limited**

**GALT, ONTARIO.**





## Our Assortment Is Complete.

Ask Your Jobber.

Representing Weyersberg Bros., Germany.  
Theile & Quack, Germany.

**F. W. LAMPLOUGH & CO., - Montreal.**

cabinet, desk or rack is made to replace one too old for further use the value as shown on the card of the old one is

out in triplicate form. Such additions are readily obtained from Form O-132 or from new cards.

gests that colors be used in their different forms. For instance, yellow orders to show their product, blue to show new tools, machinery, desks, cabinets or racks, white for all maintenance or expense orders.

Some large concerns in keeping record of the repairing of machinery, tools, buildings and fixtures, have all repairs charged as per department. The writer has found it an excellent plan, where the amount of the repairs warrant it, to charge same against the number on the machine, tool or fixture. In deciding the amount of depreciation against each machine, tool, etc., the amount expended in keeping same in a good condition will naturally help to decrease the depreciation. The writer when inspecting machinery, tools, etc., each year carries

| Material                  |                | Value | Labor | Hrs.   | Value |
|---------------------------|----------------|-------|-------|--------|-------|
| Date                      | Quantity       |       |       |        |       |
| 11/21/03                  | White Pine     | 75    |       | 11 1/2 | 1 75  |
|                           | 2 lbs. Nails   | 10    |       | 12/1   | 1 25  |
|                           |                | 85    |       | 12/7   | 50    |
|                           |                |       |       |        | 3 50  |
| OFFICE RECORD.            |                |       |       |        |       |
|                           | Total Material | 85    |       |        |       |
|                           | • Labor        | 3 50  |       |        |       |
|                           | • Factory Ex.  | 1 23  |       |        |       |
| Cost of Each 5.58 Cost of |                | 5 38  |       |        |       |

Form XIII. O. F.-44.

thrown to factory expense while the value of the new one is added to construction account by a new card bearing the same number as the old desk, cabinet or rack.

The first of every month three copies of the numbers are made out in one writing (typewritten), the original is then sent to the foreman to check with the cabinets, desks, etc., in his department, the duplicate is sent the first of the second month after additions made during the first month are recorded, then the third copy is sent the first of the third month after the additions of the first and second month are recorded thereon, after which a new set is made

### MISCELLANEOUS.

Where a factory is issuing orders for their regular product their own tools, cabinets, racks, etc., the writer sug-

### Buildings & Fixtures.

|          |          |                  | Additions. |       |       |      |      |      |      |      |      |       |      |      |      | Total Value |
|----------|----------|------------------|------------|-------|-------|------|------|------|------|------|------|-------|------|------|------|-------------|
| Shop No. | Dep. No. | Style of Fixture | Value      | Jan'y | Feb'y | Mch. | Apr. | May  | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Total Value |
| 626      | 23       | Racks            | 10 00      |       |       |      |      |      |      |      |      |       |      |      |      |             |
| 627      | 24       | Cabinet          | 25 00      |       |       | 1 25 |      |      |      |      |      |       |      |      |      |             |
| 628      | 30       | Table            | 5 00       |       |       |      |      |      |      |      |      |       |      |      |      |             |
| 629      | 26       | Stock Bin        | 7 00       | 1 50  |       |      |      |      |      |      |      |       |      |      |      |             |
| 630      | 24       | Racks            |            |       | 5 00  |      |      |      |      |      |      |       |      |      |      |             |
| 631      | 18       | Cupboard         |            |       |       |      | 5 00 | 1 50 |      |      |      |       |      |      |      |             |

Form XIV. O. F. 44.

RETURNED

AUG 20 1904

W.B. Book 22

Page 58

L.W.



## Our Card System

The Rapid Method of Modern  
Stock and Account Keeping

**P**ROGRESS is the keynote of Twenty Century Commercialism. If your Stock Room System is slow, cumbersome and unsatisfactory, our Card system will lift you out of the rut. It's simplicity itself. The short cut home in keeping accounts. Simple, accurate, convenient, it affords the greatest speed in reference and working. Reduces work to a minimum.

**Our Card System is a Time Saver, a  
Worry Saver and a Money Saver.**

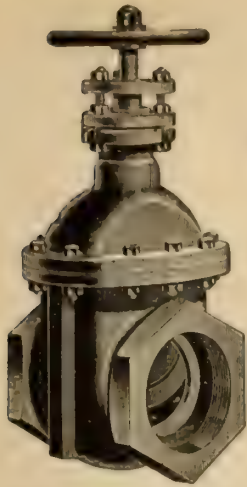
Have our Traveller show you how simple and efficacious it is. It will work a revelation in your office.

**THE OFFICE SPECIALTY MFG. CO., Limited, 55 Yonge St., TORONTO.**

Factory - NEWMARKET.

New Premises - 97-103 Wellington St. W.





## BUY KERR VALVES.

They give  
satisfaction  
every time.  
Catalogue  
on application.

The Kerr Engine Co.  
LIMITED  
Walkerville, Ont.

## SPECIFY



## INJECTORS

PENBERTHY INJECTOR CO.,  
LIMITED.

BRASS MFRS.

Windsor, Ont.

MADE IN CANADA



## Threshermen, Attention!

The Threshing belt that gives the greatest  
satisfaction is the "MAPLE LEAF"

## Stitched Cotton Duck Belt

MANUFACTURED ONLY BY THE

DOMINION BELTING COMPANY

HAMILTON, ONTARIO. Limited

Ask your dealer for it and take no other.

Beware of Imitations

Our "MAPLE LEAF" Belt Dressing is the  
best on the market—made only by us.



THE GUARDIAN OF YOUR  
INTERESTS

## Manganese Anti-Friction Metal

is a guard against loss of  
power, and saves its cost in  
oil in a short time.

Every pound guaranteed.

Syracuse Smelting Works,

Montreal,  
New York,  
Seattle.

ASK YOUR DEALER FOR IT.

## H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.  
Steel and Twist Barrels  
Superior in Design, Workmanship  
and Finish, and the most popular  
Gun on the Market.

Simplest  
"Take Down"  
Gun Made



HARRINGTON & RICHARDSON ARMS CO.  
Also makers of H. & R. Revolvers.  
Catalog on request. Worcester, Mass., U.S.A.

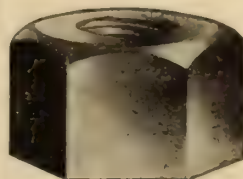
# BABBIT

NO. 1  
STAR  
SPECIAL  
HERCULES  
METALLIC  
IMPERIAL

THE  
QUALITY & PRICE TO SUIT  
ALL GRADES OF WORK.

CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



## REMEMBER

We are the only Canadian manufacturers of

## COLD PRESSED NUTS

Finished, Semi-Finished, Case Hardened,  
Plated, Polished, etc.

SPECIAL DISCOUNTS TO THE TRADE

CANADA FOUNDRY COMPANY

LIMITED

Head Office and Works, TORONTO, ONT.

District Offices — Montreal, Halifax, Ottawa, Winnipeg, Vancouver, Rossland, Calgary.



the cards with him and as each machine or tool is reached the number is taken and the card bearing the number instantly referred to, this making a verification of the details connected with each machine, etc., complete.

Book Form O-132 need not be considered as a part of the system where a small factory is concerned, but large concerns such as the writer has in mind will find same invaluable in reaching the total value of the plant account. The small concerns can prove the cards each week or month as they find it necessary. In factories where they have adopted the machine charges in treating with their production the numbering of the machine will help this condition greatly.

Where there are more than one cabinet, desk or rack made on one order (of course it being understood that they are built identically the same, otherwise an order for each must be issued) there are two ways of taking care of this condition—have the same number of tags as there are desks to be made on the order, all tags to be numbered the same as the order which we will presume to be 100, then the tag should show 100-6. This shows that there are six desks made on this order number and each must be checked up each month. The better way, however, is to issue an order for the making of the six desks and then confiscate the next 5 order numbers and number tags, charge to each of these numbers one-sixth of the cost of the building of these desks; this leaves one-sixth charged to the original order, we transferring the particulars contained on the face of the order to the five cards. The tags attached to the five desks are numbered correspondingly to the five cards.

The reader will notice the prefixing of O and F before the form number on all the forms in this book; this is a system to guide the office in charging out the cost of printing these forms to the office or factory. Where the numbers are prefixed by the two letters O F it signifies expense is to be charged half to office and half to factory.

#### Motor Cars at Plymouth.

A NEW service of rail motor cars has been established by the Great Western Railway Company, England, between Plymouth and Plympton and Plymouth and Saltash. The first service of the kind was started by the company in October last upon their line which runs through the Stroud Valley, and the undertaking proved so successful that shortly afterwards another set of cars were put on between Paddington and Southall, and later still on the Lambourn Valley line from Newbury. The outcome in each case was so satis-

factory that recently the company determined to augment the ordinary local train service by the provision of three rail motors.

The cars, comfortably fitted, are built on the Pullman plan, affording sufficient room for moving about. Paneled windows, the full length of the car, permit of plenty of light and means of viewing the district through which it passes. Each car is 57 feet long, 8 feet 6 inches wide, and 8 feet 2 inches high. It is supported on two bogies, the wheels of which are 3 feet 8 inches in diameter. Seating accommodation is provided for 50 passengers, who enter at one end of the car, while the other is partitioned off to inclose a vertical boiler. This stands directly over the bogie which provides the four coupled wheels of the engine. The latter consists of two outside cylinders, 12 inches in diameter with 16 inches stroke, and are fitted with Walschaert's valve gear. The boiler is 9 feet 6 inches high and of 5 feet mean diameter, with 477 vertical tubes, and carries a working steam pressure of 185 pounds per square inch. Each car, which is lighted with oil gas, represents a cost of £2,000 (\$9,733). The cars can be driven from either end, there being a glass lookout at each. The motor can develop sufficient power to draw an ordinary railway car as a trailer.—United States Consul, Plymouth, England.

#### A NEW INDUSTRY.

ELSEWHERE in this issue will be found the initial announcement or introduction of the Galt Art Metal Co., Limited, to the Canadian trade. This company was formed a few months ago by some of the leading manufacturers of Galt for the purpose of manufacturing a complete line of architectural sheet metal building material along the line of steel ceilings and walls, roofing, siding, etc.

They have erected a very large plant in Galt and are now manufacturing and shipping and are prepared to handle all business in the lines accessory to the building trade in sheet metal.

The officers of the company are all well known to the trade. The president is Mr. D. Spiers, president of the Galt Gas Co. Mr. Hugh McCulloch, Jr., vice president of the Goldie & McCulloch Co. is vice-president, and Mr. F. H. Hayhurst, who for several years has been general manager of James Warnock & Co., is the secretary-treasurer and managing director.

### CONDENSED MACHINERY ADS.

#### YEARLY CONTRACT RATES.

|                                  |         |
|----------------------------------|---------|
| 100 words each insertion, 1 year | \$30 00 |
| " " " 6 months                   | 17 00   |
| " " " 3 months                   | 10 00   |
| 50 " " " 1 year                  | 17 00   |
| " " " 6 months                   | 10 00   |
| 25 " " " 1 year                  | 10 00   |

#### MACHINERY WANTED.

Notices under this heading inserted free for subscribers to **HARDWARE AND METAL**.

**C**IRCULAR shears and double seaming machine, in good order. Moore Bros., Bradford, Ont. (29)

**M**ACHINIST.—Wanted, a good machinist for general repair work; steady job. W. G. Paton, Wingham, Ont.

#### MACHINERY FOR SALE.

Rates for first insertion 2c. a word, and for subsequent insertions 1c. a word.

**E**NGINE LATHE—Swings 17 in. over shears, takes 4 ft. between centres; good order; cheap for cash. Address Machinery Exchange, 22-24 Victoria Square, Montreal.

**F**ORGES—Portable and stationary—with and without down-draft attachments, also forge blowers. Sheldon & Sheldon, Galt.

**F**OR heavy machine dressed, smooth running iron or steel gearing, write the Wm. Kennedy & Sons Limited, Owen Sound.

**G**AS and gasoline engines—stationary, marine, automobile; also launches; silver medal, highest award Dominion Exhibition, Toronto; write for catalogue. The Gasoline Engine Company of Toronto Junction, Limited.

**G**AS AND GASOLINE ENGINES.—Fairbanks, 1 to 100 h.p.; stationary, portable and marine; fully guaranteed; reliable and economical. Write for catalogue and prices. The Fairbanks Company, Toronto.

**M**ACHINE TOOLS for prompt delivery—Planers, shapers, lathes, drills, bolt cutters, milling machines, punches and shears; also, full line of machinists' supplies. Good second-hand machinery taken in exchange. Show room open 7 a.m. to 11 p.m. H. W. Petrie, Toronto.

**O**NE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

**O**NE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

**P**UMPS—Standard duplex pumps in stock. The Smart-Turner Machine Co., Limited, Hamilton.

**T**HE STUART MACHINERY CO., LTD., 764-766 Main street, Winnipeg, sole agents in the West for MacGregor Gurlay swood working and iron working machinery, than which there is none better. Also for Beardmore's leather belting, Dodge wood pulleys and self-oiling hangers, Soule steam feeds for sawmills, E. Leonard & Son's engines and boilers, Stratford flour mill machinery etc., etc., etc.



Among the large orders received recently by the Levy, Weston & McLean Machinery Co., Toronto, are a 66X11 boiler, Morlock Bros., Guelph, a 15X31 Wheelock engine for the Tilsonburg Electric Light Works.

Joy & Medham, contractors, Toronto, have placed an order with H. W. Petrie for a double cylinder and double drum hoisting drum.

**The Best Door Closer Is . . .**

**NEWMAN'S INVINCIBLE FLOOR SPRING**

Will close a door silently against any pressure of wind. Has many working advantages over the ordinary spring, and has twice the wear. In use throughout Great Britain and the Colonies. Gives perfect satisfaction. Made only by

**W. NEWMAN & SONS,**

Hospital St., BIRMINGHAM

**TRADE WITH ENGLAND**

Every Canadian who wishes to trade successfully with the Old Country should read

**"Commercial Intelligence"**

(The address is 168 Fleet St., London, England.)

The cost is only 6c. per week. (Annual subscription, including postage, \$4.80.)

Moreover, regular subscribers are allowed to advertise without charge in the paper. See the rules.

**Want Ads.**

In this paper cost 2 cents per word first insertion, 1 cent per word subsequent insertions. Contractions count as one word, but five figures (such as \$1,000) may pass as one word. Cash remittance to cover cost **must in all cases** accompany orders, otherwise we cannot insert the advertisement. When replies come in our care 5 cents additional must be included for forwarding same. Many large business deals have been brought about through advertisements of 20 or 30 words. Clerks can be secured, articles sold and exchanged, at small expenditure.

**MacLEAN PUBLISHING CO., Limited**  
Montreal and Toronto.

**Buy the Best.**



**HERCULES**

**Sash Cord.**

Star Brand Cotton Rope  
Star Brand Cotton Clothes Lines  
Star Brand Cotton Twine

For Sale by all Wholesale Dealers.

**DAVISON'S MINIATURE TOOLS.**

A perfect working model wrench, exact size of cut. Accurately proportioned and made exactly to scale. Handsomely nickel-plated. Sells on sight.  
**\$2.00 per doz. Pearl Hand e. \$3.00 doz.**



**DAVISON MFG. CO., 112 Front St., Brooklyn, N.Y.**



**HOOKS,**

CUP and SQUARE HOOKS in BRIGHT IRON, BRASS, IRON and SOLID BRASS

SCREW RINGS and GENERAL BRASS FOUNDRY

**JONES & BARCLAY,**

Bath Row, BIRMINGHAM, Eng.

**Genuine Pratts Astral Lamp Oil**

Sold in all countries and recognized as the highest grade oil manufactured.

**WHOLESALE ONLY**

THE QUEEN CITY OIL COMPANY, Limited, - TORONTO, ONT.

**The Eureka Skate Sharpener**



Send for Green Book of Hardware Specialties for particulars and prices, Dept. F.

**SMITH & HEMENWAY CO.,**  
290 BROADWAY, NEW YORK CITY.

Canadian Sample Room - 215 Cornsine Bldg., MONTREAL.  
ALLEN C. JENKING, Canadian Manager.



**Corundum FOR Polishing**

**OPINIONS OF USERS:**

Factory "G." International Silver Co., Norwich, Conn., says:

"We find it will do just double the work that any emery we ever had would do. Wheels that have lasted us from ten to twelve days with emery are now lasting us from twenty-four to twenty-six with corundum. Besides the saving in time, the work itself is very much more satisfactory."

We are pleased to supply samples for testing purposes.

**The Canada Corundum Company, Limited**  
TORONTO, CANADA.



# ELECTRICAL GOODS AND SUPPLIES

## Future Electric Lighting.

NO one has yet been found bold enough to prophesy what the light of the near future is going to be, so great have been the developments within the past few years. C. P. Steinmetz, who is one of the greatest authorities on this subject, discusses the question in Cassier's Magazine, a review of which is given below, with reference to the electric arc:

Gases and vapours are made luminous by electrical excitation, either by the electrostatic spark, as in the Geissler tube, or by the electric arc. A spark is made by the passage of an electric current over a gap between conducting terminals through the gas or vapour filling the space. To produce a spark the voltage or electric pressure has to be raised until it breaks down the gap between the terminals. This usually requires a very high voltage, but only a small current. The electric arc is made by the passage of a current across a gap through a conducting vapor bridge formed by the material of the terminals, at relatively low voltage but high current. The arc does not start itself, the vapor bridge having first to be formed, either by jumping a spark across the gap or by bringing the two terminals into contact with each other and then separating them. A bridge of vapor, at the temperature of the boiling point of the material of the terminals, is thereby left behind, which is constantly replenished by evaporation from the terminals. Such an arc may be formed either at atmospheric pressure or in a vacuum. The carbon arc is the hottest of electric arcs, while mercury has such a low boiling point that the mercury can be, and is, enclosed by a gas tube.

Experiments are also being made on the production of luminosity in gases by the electrostatic spark in a partial vacuum, as in the Geissler tube; but the great difficulty seems to be in the high voltage required and the low intrinsic brilliancy of the Geissler tube glow, which requires the use of enormous sur-

faces to produce sufficient illumination.

Metal salts introduced in a non-luminous gas flame make it luminous by giving their characteristic metal spectra, as: sodium salts, yellow; lithium, red. Here the luminosity of the metal vapours is probably due to chemical reaction. A much greater brilliancy than that obtained by the use of a gas flame can be secured by introducing such metal salts into a carbon arc, the latter being very much hotter than the former. The best way is to incorporate these metal compounds into the positive carbon termin-

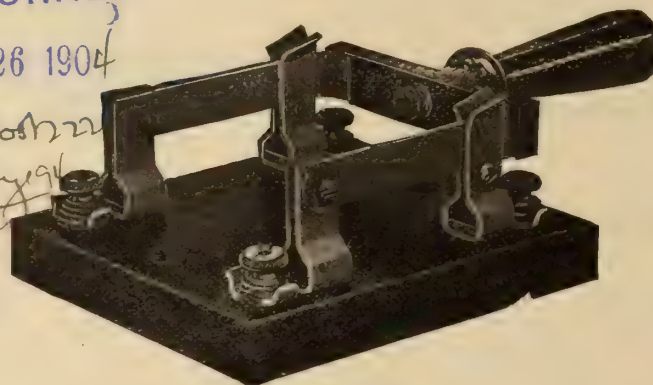
to be replaced or the lamp trimmed every day, while the enclosed lamp needs attention once a week or less frequently. To-day the short-burning or open carbon arc has almost entirely been replaced by the long-burning or enclosed arc. Whether the high efficiency of the flame carbon arc will be sufficient to compensate for the short life of the carbons and so reduce the open arc, remains to be seen.

If we compare the efficiency realized in the production of light from electric energy of perhaps 5 per cent. as a maxi-

RETURNED

AUG 26 1904

*W. B. Smith*  
*Payroll*



Electrical Switch.

al, that being the hotter, and, therefore, giving more rapid evaporation. Arc lamp carbons impregnated with metal salts, so-called flame carbons or effect carbons, are now on the market. They give, in addition to the light of the incandescent carbon crater, an additional light from the arc flame, and so an efficiency much higher than the ordinary carbon arc. Their main drawback, however, is that they must be operated as open arcs; they cannot be protected from rapid combustion by an air-tight enclosing globe, since the metal salts produce a smoke or dust which has to be carried off. Such flame carbon arcs, while far more efficient than the ordinary enclosed arc of to-day, are what is called "short-burning": the carbons have

num, with the efficiency of producing mechanical energy in the electric motor, or electric energy from mechanical energy in the electric generator, where values of 90 per cent. to 97 per cent. are commonly realized, the present methods of electric lighting appear rather crude in their principle; it is really heat that we produce, and light appears almost as a mere by-product. While, therefore, no very essential advance in the efficiency of electric motors, generators, etc., is possible, electric lighting is still in its very beginning. The amount of light produced from electric energy may well be increased ten-fold, and the efficiency of light production would still be low compared with the efficiency of the electric motor.



We make Electric Fixtures, Sockets and Cut-Outs.

# Munderloh & Co

Electrical Supplies of all kinds.

MONTREAL.

In this direction, then, an enormous advance in the use of electricity can be hoped for in the future. If the efficiency of production or light from electric energy could be raised to the efficiency of the poorest electric motor on the market, electric light would sweep all other illuminants out of existence by its cheapness. This is well realized by those in control of the electrical industry of to-day, and some years since many of the giant electrical manufacturing companies of this country and abroad established extensive laboratories for the investigation and study of improved methods of electric lighting. In the last years avenues of research have been opened and are being energetically pursued in these laboratories, which promise to replace the present indirect and inefficient methods of light production by a more direct transformation of electric energy into light, with a far higher efficiency.

## Lighting Plant for Wanamaker.

The largest and one of the most elaborate isolated lighting plants of its description in this country is to be installed in the new John Wanamaker department store, now under construction in Philadelphia. The capacity of the plant will be 1,000 k. w. Contracts for the equipment will be awarded next

week to John W. Haddock of Philadelphia, who is John Wanamaker's superintendent of construction. Big units will be put in. The electrical plant for the new store in New York, which was contracted for last April, is also to be a large one. The capacity will be 1,800 k. w. The generators, six in number, will be of Westinghouse build, and are to be direct connected to Buckeye engines. The two biggest isolated lighting plants formerly installed in the United States were in the Macy department store, and the Metropolitan Life Building.

## Electric Switch.

The electrical trade will be pleased to know that there is now on the market a first-class service switch strictly in accordance with the Underwriters' rules, and which can be purchased at a moderate price. There is nothing new in the design, or general appearance, of the switch. This, however, may be noticed: the workmanship is good.

This switch can be purchased both in plain and polished finish, one is equally as good as the other, and for ordinary work the plain unfinished switch answers all requirements, as the contracts are good, and once installed does not give the trouble caused by the installation of cheaper imitations.

These switches are made of pure hard drawn copper to comply with the latest rules of the National Board of Fire Underwriters. They are made in single, double, or triple pole, single or double throw, with and without fused terminals, back or front connections.

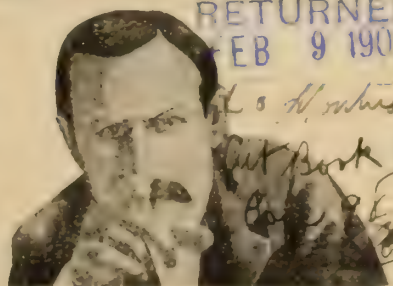
Munderloh & Co., manufacturers of electrical supplies, Montreal, will be glad to answer any enquiries from parties interested in this switch, such as contractors, dealers, etc.

## TAX ON COMMERCIAL TRAVELERS

In answer to an inquiry from one of our readers as to whether there is a tax on Eastern Canadian commercial travelers wishing to do business with either the wholesale or retail trade in the city of Winnipeg, we wish to state that no such tax is imposed at the present time.

The Allis, Chalmers, Bullock Co., Limited, through their Winnipeg office, have secured the contract for supplying the electrical driven pumps for the Lethbridge waterworks. These will be installed before December 1st. This company has recently opened a branch office in Winnipeg in the British North American building, with Mr. L. J. Beirup in charge as district manager.

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RETURNED  
FEB 9 1905

ELECTRIC SAYER

ELECTRIC SAYER

ELECTRIC SAYER

## SPECIAL NOTICE

To the Hardware and General Trade:

We have this day made a contract with the publishers for this space, our advertisement to appear weekly. We have therefore different electrical articles which the practical experience of our hardware customers has shown to be best sellers for their trade.

If you intend stocking even a sample of these goods, write us.

You will make no mistake in getting our prices, for we handle **EVERYTHING ELECTRICAL** and we know we have one of the best electric stocks in Canada.

Awaiting your request for catalogues and bulletins, we are

Your obedient servant

**SAYER ELECTRIC CO., 10-12 Beaver Hall Hill, MONTREAL.**

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# THE CONSUMER LOOKS TO THE DEALER

to furnish him or her with the very best article that can be purchased for the money they expend. If the dealer fails in this a good customer may be sacrificed. Every dealer should know that in

## BOECKH'S STANDARD BRUSHES and BROOMS

they not only furnish to their customers the very best goods that can be made, but they afford at the same time the largest margin of profit. Satisfaction to dealer and consumer guaranteed.



**UNITED FACTORIES, Limited**

**OPERATING:**

Boeckh's Toronto Factories.  
Bryan's London Factories.  
Cane's Newmarket Factories.

**Head Office: TORONTO, ONT.**

**Branches—LONDON and MONTREAL.**

# Coal Hods and Stove Boards

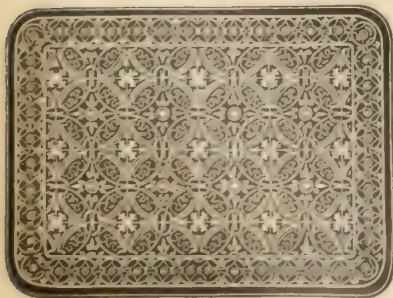
With the Fall impetus in stove-buying and moving, there will be a brisk demand for Coal Hods and Stove Boards.

The dealers who buy from the manufacturers making the largest assortment and best-wearing "hods" and "boards" will naturally sell the greatest quantity of these articles.



**Coal Hods** *Plain, Striped, Gold-Striped,  
Japanned and Galvanized.*

9 SIZES AND 13 STYLES.



**Stove Boards**

Lithographed, in 14 styles and sizes.  
Crystalized, in 19 styles and sizes.

If you want your goods quickly,  
order from McClary's.

**The McClary Manufacturing Co.**

LONDON TORONTO MONTREAL WINNIPEG VANCOUVER and ST. JOHN, N.B.

**"Everything for the Tinshop."**



# HARDWARE AND METAL

President:

JOHN BAYNE MACLEAN.

Montreal.

## The MacLean Publishing Co. Limited

Publishers of Trade Newspapers which circulate in the Provinces of British Columbia, North-West Territories, Manitoba, Ontario, Quebec, Nova Scotia, New Brunswick, P.E. Island and Newfoundland.

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Telephone 1846.  
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LONDON, ENG. - - 88 Fleet Street, E.C.  
J. Meredith McKim.  
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J. Hunter White.  
NEW YORK - Room 1241 New York Life Bldg.  
W. T. Robson.  
VANCOUVER, B.C. - Geo. S. B. Perry.

Subscription, Canada and United States, \$2.00.  
Great Britain and elsewhere - 12s

Published every Saturday.

Cable Address { Adscript, London.  
Adscript, Canada.

### NEW ADVERTISEMENTS.

Naxos-Union, Frankfurt-on-Main, Germany.

## WONDERFUL MINERAL RESOURCES.

IN Ontario, and particularly about the Sudbury District, there is mineral wealth in copper, iron, nickel and gold, that when developed gives promise of making that province one of the greatest mining districts in the world. In regard to the nickel development the largest company operating at Sudbury is known as the Canadian Copper Co. This is controlled by the International Nickel Co., an American concern with a capitalization of \$36,000,000. This was developed out of an original investment of \$260,000. During the past and the present year improvements have been and are being made in the plant and equipment at Sudbury, costing in the neighborhood of \$1,000,000. One of the properties of the Canadian Copper Co., namely, the Creighton Mine, has been proved by exhaustive diamond boring to be one of the richest mines in the world. The importance of the nickel industry, and its development, to Canada may be understood by the

fact that the C. P. R. received for freight out of Sudbury and vicinity over \$1,600,000.

The great and only formula for the Sudbury in nickel deposits is New Caledonia, in Australasia. Formerly the product of these deposits rivaled the nickel markets of the world, but last year the Sudbury deposits produced more nickel than New Caledonia.

At present there is only one railway into the Sudbury District, namely, the Canadian Pacific, but both McKenzie and Mann and the Grand Trunk Pacific intend tapping this district. The activity of the two latter railway companies in this respect is also due to their desire to secure a share of the immense freight traffic which will arise from the development from the enormous bodies of iron ore, which are known to exist there.

Both copper and gold have been found in paying quantities in the Sudbury District. At the Massey mine, west of Sudbury, there is a shaft 700 feet down, sunk in good paying copper ore.

While the nickel, copper and gold deposits are of great importance and occur in large quantities, they are hardly comparable with the enormous quantity of commercial iron ore that exists in this district. There is so much of a high quality of ore in sight that its value is almost incalculable. As soon as transportation facilities have advanced sufficiently these are bound to be developed to an enormous extent, with the result of placing Canada at the top of the iron producing countries of the world. These deposits are not dependant upon the new electrical process of smelting, as they are easily accessible, while the development of the deposits in the Temagami districts will depend upon the electric furnace for their reduction.

## THE VALLEY OF THE MERSEY.

In this week's issue is published the first of a series of letters which William H. Evans, of the Canada Paint Co., who is at present enjoying a trip through the Old Country, is contributing to the columns of Hardware and Metal. Through these letters readers will be able to follow Mr. Evans on his travels with a keen interest.

## MAINTENANCE OF PRICES.

ONE of the most difficult problems the retail hardware merchant has to solve is that of maintaining a fixed price on his wares. The fashion of having a sliding scale of prices, charging careless buyers more than cautious ones for the same goods, has in practically every district of the country given way to the more up-to-date system of having a fixed price for each line, and adhering to it, regardless of the importance of any customer.

The modern method entails a close study of both the first cost of goods, of freights and of the cost of doing business. Having this knowledge, or as much to that end as possible, the retailer must decide what margin of profit over and above costs he will allow himself, and what his attitude will be towards competitors who cut prices on some lines.

In deciding the amount of margin the retailer should have a wide knowledge of what competing retailers, not of his own town alone, but also of adjacent ones sometimes visited by his customers. If too high a margin is set the result will be to send away instead of attracting business.

Having learned in a thorough way the prices he must compete against, he may fairly set his prices at as high as he deems reasonable. The aim should be to have prices fully as high as one's competitors, and to beat out the latter in promptness of service, in pleasant and courteous treatment of customers and, above all, in completeness of stock carried. A well assorted stock can always be sold at higher prices in a store where the service is pleasant and prompt than can be in a store where the customer cannot be sure of getting what he wants or of the treatment he will receive.

The problem of price-cutting is important. Here the departmental stores are a factor to be considered, and the retailer will do well to keep in touch with the bargain (?) of the big departmentals, as well as with local and adjacent competitors.

Price-cutting is carried to a deplorable excess by many retailers. It seems, too, a habit extremely difficult



to break when several dealers in a town have once started it. The practice is not, however, altogether lacking in good points. The departmentals have, in fact, reduced it to a system.

These stores never cut prices except for definite purposes. In many cases the purpose is to get rid of surplus stock at the end of a season, in other instances it is done to advertise the store. In the latter case the difference between the regular and the cut price is charged up as advertising, and the total of the loss (or correctly speaking, advertising cost), is kept within specified bounds. In this way the benefits are fully as great as the losses incurred.

What the departmentals have found good business the average retailer will find equally good—if they use the same care and judgment in choosing the lines to cut. It should be recognized that it is good policy to sell, even at a cut, at the close of each season all goods likely to deteriorate in value before the next season. And it is good policy to advertise if the expense be kept within reasonable limits.

Where there are three or more retailers in one town it is a good practice to meet once in a while to fix prices for regular sale. At such meetings it would be a tremendous advantage to all if each one, having full confidence in his competitors, would agree as to what amount of cutting would be done within specified periods of time.

#### ORGANIZE AT ONCE.

THE excellent work done at the meeting of the western retail hardware and stove dealers at Winnipeg will be made effective only by the prompt co-operation of those interested. It is not sufficient to be interested or to be willing to become a member.

What is necessary is that all those who desire to make the associations powerful factors for good, should, in the first place, send in their membership fees at once.

Fees for the western association, amounting to \$2, should be sent at once to E. H. Johnson, of Regina, treasurer of that body. All hardware and stove dealers in Manitoba and the Territories are eligible to, and in their own interest should, join this association on payment

of this nominal fee. An assessment of \$3 may be called before the association year ends, but that will only be in case work is done to make the additional revenue necessary. And if that much work is done the fees will be an investment that will yield inestimable results.

In the second place, members of the western association should start at once to take advantage of its strength. If any grievances of material importance arise they should be at once placed before Secretary W. W. Lindsay, of Winnipeg, who can be depended on to have the matter placed before the executive and the necessary steps taken to remedy the wrongs.

If each retailer delays in sending in his fees and in submitting his grievances the force and effectiveness of the Winnipeg meeting will be lost before the mark aimed at—the creation of a useful association—is reached.

#### AN IMPORTANT DECISION.

A CASE of much more than passing interest to the mining fraternity in particular, and to Canadians in general, has recently been settled by the Privy Council of England, the highest court in the Empire. The suit was brought about by the Ontario Mining Co. against another represented by Seybold, E. B. Osler, and others, as to the title of certain mining properties in New Ontario. The point to be settled was whether the Dominion Government or the Provincial, had the right to give the title deeds for mining property. J. M. Clark, M. Can. Soc. C. E., who is an authority on mining law, was senior counsel for the defendant, representing the provincial side of the question. The matter was fought from court to court, and the defendants were successful in the final decision. Mr. Clark pointed out that the condition of affairs that existed was very prejudicial to the development of Western Ontario, and until the dispute was finally settled regarding the title of mining properties, no capitalists would invest in these lands. It is very satisfactory to know that the case has been finally and definitely settled. The result will no doubt be widespread and will tend towards a fuller development of greater Ontario.

#### SOME HAPPENINGS IN THE WEST.

THE Pease-Waldon Co., Limited, Winnipeg, the western representatives of the Pease Foundry Co., Toronto, have settled down in their offices on Lombard street, and are rapidly getting their business in such shape that any of the trade will find their display well worthy of attention. The reputation of the Pease "Economy" furnaces in the east is such that a strong connection will probably be made by the Pease-Waldon Co. in a short while. The business will be managed by John G. McKinnon, while Charles Waldon will represent them throughout the west.

• • •

The Canadian Heating and Ventilating Co., Owen Sound, Ont., are represented in Winnipeg by the Christie Bros. Co., Limited, 238 King street. Of the Winnipeg company J. A. Christie is acting as vice-president, J. E. Atkins, secretary-treasurer, and A. D. Christie as a director. Mr. Atkins has charge of the office and store; J. A. Christie represents the firm as traveler, and A. D. Christie looks after the tinshop and all mechanical work in connection with the business. In this branch a full line of the stoves, ranges and furnaces made by the Canadian Heating and Ventilating Co. will be carried for the western trade. Already the "Empire Queen" has caught on in the west, and seems likely to have an excellent sale.

• • •

Mr. J. W. Smith, first vice-president of the Western Hardware and Stove Dealers' Association, whose photograph is herewith shown to our readers, is one of the pioneer hardware merchants of the west. Not only has Mr. Smith built up in the Smith & Ferguson Co., Regina, a large and profitable business in hardware, coal, metals, etc., but he is recognized as one of the most far-sighted and progressive men in Regina, and in the two years, 1902 and 1903, in which he sat as mayor of that city, he was instrumental in starting a movement in favor of municipal waterworks and electric light plants, which are now being installed.

• • •

The open season for ducks starts on August 23rd in the Northwest Territories, and on September 1 in Manitoba. Already the sales of ammunition have become one of the most important factors in the day's business with many retailers, while guns are being freely purchased. As the open season for prairie chicken, partridge, etc., does not open till September 15, and as there are great numbers of both wild ducks and prairie chickens in many parts of the



west, the demand for these lines is likely to continue keen for some time.

• • •

A big furnace trade is looked for throughout the west this year. The western farmer has realized the advantages of heating by hot air furnace or by steam, or hot water, instead of by using stoves. Consequently in almost every house of any pretensions furnaces are being installed, unless the owner feels able to stand the heavier cost of a hot water or steam radiator system.

• • •

Mr. Karl Boez, formerly engaged with the Smith & Ferguson Co., hardware merchants, Regina, has decided to start a hardware store in that town. Mr. Boez has completed some of his buying, but has been delayed in the construction of his store, which will not now be ready before about October 1.

• • •

Threshing is due to start throughout the west in the next week or two. As a consequence hardware dealers are finding a good demand for threshermen's supplies of all kinds. As a good crop is expected, and as prices are around the dollar mark, another prosperous year is anticipated by retail merchants throughout the west. Unless an early frost, not at all expected, should spoil the prospects, retail hardwaremen should have their accounts well cleaned up this Fall.

### THE VALLEY OF THE MERSEY

By Wm. H. Evans

**N**O port of the world is more intimately connected with Canada than that of Liverpool, on the River Mersey.

During the opening of navigation scarcely a day passes that does not see a vessel laden with passengers and the products of Canada leave Montreal for the Mersey.

At the entrance to the river on the Cheshire side (who has not heard of Cheshire cheese?) stands the watering place of New Brighton, the Coney Island of Liverpool, famous for its appetizing air, Ham and Egg Parade, its Tea Pot Row, its donkeys, sands and "freaks." Upon certain days "trippers," as the one day excursionists are called, abound, and their dialect and chatter are a revelation to one unused to the manufacturing districts of Lancashire and Yorkshire. Upon the Cheshire side of the river, opposite to Liverpool, numerous resorts and important places greet the observer who is making a boat trip. We have, after leaving New Brighton, Egremont, Seacombe, (near here the cattle arriving from Canada are slaughtered,) Birken-

head, where the first street car tram line was constructed, and where the saucy "Alabama" was built, Tranmere, Rock Ferry and Port Sunlight. This place is the home of Lever's Sunlight soap, and is a modern and model town of recent growth, laid out upon hygienic lines.

Next, after passing a large number of vessels in the river, and three old men-of-war vessels, reminiscent of Nelson and a by-gone age, now used as training ships, we come to Eastham, known familiarly as

#### THE RICHMOND OF THE MERSEY

This is a charming spot situated at the entrance to the great Manchester Ship Canal.

Eastham, the "East Hamlet" of ancient times, is a pleasure resort where

you may go to the Eastham Garden Hotel, which is delightfully situated amidst the most romantic grounds with a glorious backing of lime, yew, ash and oak trees. Mrs. Gough, the accomplished manageress, will welcome one with a smile and cheeriness which is refreshing. A more coaxing tea delicately served with the napery and service of the best, it would be hard to find anywhere, and the trim manner of the entire surroundings largely remind one of Switzerland.

The Eastham ferry service to Liverpool is remarkably good, and the officials seem to be all men of advanced ideas, courteous and ready to afford the visitor every attention, and I take pleasure in testifying to their extreme kindness to the writer. May they long be strangers to the gout!



J. W. Smith, Regina  
1st Vice President, Western Hardware and Store Dealers Association

you may "loop the loop," "shoot the chute," visit the curiosities, have a ride upon a donkey or pony, or try your luck with old Aunt Sally—dear old Aunt Sally of our youth, who always "bobs up serenely" and continues to smile even when you land her one on the nose or upon her highly painted cheek.

"Begone Dull Care" is the motto at Eastham, and if you lend yourself to all the nonsense and frolic hereabouts it will drive away the blues and brighten your eye. Presuming you have flitted with and crossed the hand of the dusky-skinned gypsy maiden with silver, after Mona has told you your fortune, and do not care for a shrimp tea at the booths,

I spend an enjoyable day about Eastham. The woods, the ancestral homes of the Stanleys, the old church, the engaging rosy-cheeked girls and the pleasant views along the drowsy banks of the upper reaches of the river are all interesting. Sit, light your cigar and think of the places near at hand: Chester, the ancient Roman city not miles away, Parkgate, on the Dee, seven miles, where at one time packtrains halted regularly to Ireland, Russia, the home of the alkali industry, St. Helens, the famous glass works, Warrington, famous for its wire and other wares. Still further in Lancashire is Manchester, that city of "Cotton, Lint and Twills."

In my next, dear and indulgent reader, I hope to speak of Liverpool.



# MARKETS AND MARKET NOTES

## QUEBEC MARKETS.

Office of HARDWARE AND METAL,  
232 McGill Street  
Montreal, Aug. 18, 1904

**M**OST of the business being done in the hardware line at present, is in the direction of Fall trade, for which prospects were never brighter. Ordinary business can hardly be said to be brisk, but has picked up considerably during the week. The travelers are again on the road in full force, and are sending in larger orders than usual, due to the hopeful state of trade as well as to their own energy.

Lanterns are having an unusually big sale, while sleigh bells, skates, sporting goods, guns, ammunition, etc., are very active. A few changes in price are noted this week. Currycombs and wringers have advanced slightly. Cement is quoted lower, which is also the case with annealed wire, the latter being reduced from a base of \$2.50 to \$2.25. The wire nail situation is still unsatisfactory, and efforts to maintain the price have so far been unsuccessful.

**Agricultural Wrenches**—The market still keeps fairly good. We quote: 6 in., \$2.85 a dozen; 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

**Grindstones**—Although Spring is usually the time when a big demand is expected Fall trade has opened up in larger volume than usual. We quote: 40 to 200 lbs., 2 in., and over thick, \$1.10 to \$1.20; 20 to 40 lbs., 2 in. thick and over, \$1.20; 11-2 in. thick and under 2 in., \$1.30.

**Skates**—A brisk demand is reported from all sides. We quote the following prices: Halifax pattern, plain, 38c a pair; nickeled, 60c a pair; Ladies nickel plated, plain 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50 a pair; hockey, plain steel 30c a pair; nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop \$1.30 a pair, high grade nickel plated, concaved \$1.60 a pair.

**Hockey Sticks**—Prices are: Second growth men's \$4.00 a dozen; second growth ash, men's, \$3.30 a dozen; rock

elm \$2.35 a dozen; boys' elm, \$1.50 a dozen.

**Hockey Pucks**—Price quoted for coming season is \$2.10 a dozen.

**Lanterns**—A record sale of these goods is reported for this season. We quote as follows: Cold blast, \$7 a dozen; No. 0 Safety, \$4 a dozen.

**Sleigh Bells**—Large orders for sleigh bells have been received for the Winter trade. Our quotations are: Brass team bells, rough \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5.00 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3.00 each.

**Washing Machines**—The market is hardly as active as it was earlier, we quote: Round (three legs, \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

**Wringers**—These have advanced during the week, and are now somewhat higher in price. The demand is fairly good. The new discount is 33 1-3 per cent.

**Currycombs**—There has also been a change in currycombs. Business continues brisk. The new discount is 37 1-2 per cent.

**Heavy Screw Hooks and Hinges**—Hardly as active this week as last. Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

**Wire Coat and Hat Hooks**—An average demand is reported. Prices continue 75 cents a gross for three inch.

**Annealed Wire**—An unusually good season is reported for this line, especially in annealed hay wire. A reduction in price is noted this week. The price has been lowered from a base of \$2.50 per 100 lbs. to \$2.25 per 100 lbs.

**Fence Staples**—A nominal trade is being done. We quote: \$3 per 100 pound keg for galvanized, and \$2.80 for bright; 25 to 50 lb. packages, 25c extra.

**Barb Wire**—In fairly active demand. We quote: \$2.75 per 100 lb. f.o.b.

Montreal, and \$2.50 f. o. b. Cleveland. Car lots of 15 tons, \$2.40 f. o. b. Cleveland.

**Galvanized Wire**—An unusual quietness prevails and very little stock is moving. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, \$3.20; No. 12, \$2.60; No. 13, \$2.70; No. 14, \$3.70. In car lots f.o.b. Cleveland, No 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. \*In less than car lots 12 1-2c extra per 100 lbs. will be charged.

**Rivets and Burrs**—In somewhat lessened demand, but a fair trade is being done. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

**Screws**—Business in these has continued brisk throughout the season. Discounts are as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass flat head, 80 per cent.

**Bolts and Nuts**—Trade continues steady. Prices and discounts remain the same. Our quotations are as follows: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

**Cut Nails**—Building and contracting, as well as the ordinary hardware trade



still require large quantities of cut nails. We quote as before, \$2.30 per keg f.o.b. Montreal, Hamilton, Toronto and St. John.

**Wire Nails**—The unsatisfactory condition of affairs in the wire nail market shows no sign of a change. Prices are still being cut in all quarters so that proper quotations can hardly be given. Although we quote higher than last week there is no certainty that these prices are maintained. We quote \$2.40 per keg, carlots and \$2.45 per keg in small lots f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

**Pressed Spikes**—A nominal trade is being done at the same discount of 25 per cent.

**Horseshoes**—The usual amount of business is being done. We quote: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

**Horsenails**—A fair and steady trade is reported. We quote as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. Other brands 55 and 57 1-2 per cent off list.

**Sporting Goods and Supplies**—In the sporting goods and supplies line prospects were never brighter for an unusually large business. Large orders are being received from travelers, and there is every evidence of an increased trade. The prices of the different lines on application.

**Shot Guns and Rifles**—There is no change in price this week, and an increasing briskness is reported from all sides.

**Ammunition**—There is a bright tone to this market, even more so than usual. No change in prices this week. We quote: Rim fire cartridges, 30 and 21-2 per cent. discount from list; centre fire, 5 per cent. advance on list; loaded shells 17 1-2 per cent. discount from list.

**Roofing Pitch**—There has been no quietness in this market. Business still continues good. The price stands as before, \$1 per cwt.

**Building Paper**—No change from last week. There is still an average volume of trade being done. Our quotations are as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

**Fire Brick**—The market is dull with no change whatever in price.

**Cement**—Business is a little more active than it has been throughout the Summer, but even yet it has not reached to any degree of briskness. We quote somewhat lower prices this week, due to the weakening of the market in the Old Country. Quotations are: English, \$2 to \$2.10; Belgian, \$1.70 to \$2.10, per barrel, ex-store, and American, \$2.20 to \$2.40, ex-cars.

**Cordage**—There is no change in the cordage business. It is reported somewhat brighter than during previous weeks, but can hardly be said to be active as yet. We quote: British pure manila, 11 1-2c; pure manila, 14 1-2c; sisal, 11c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

## METALS.

Quietness is the dominant feature of the metal market, although there is a slight feeling of increased activity. A few lines are reported moving well, but for the most part there is a dullness continuing the conditions that have prevailed recently. There is no change in the price of pig iron, which market is featureless. There is a steady demand for copper and tin. Lead was firmer during the week, but there is no change in quotations. The only change in price is a reduction on galvanized Canada plate, and a slightly lower price in Comet galvanized iron. In the scrap metal market, it is believed that prices have reached their lowest level, and an advance is not far off. Very few transactions have taken place in iron, while

the demand for copper and brass continues quiet. There is at present a market in Great Britain for the latter metals, while there is none from the local foundries. The general outlook seems better, but until the foundries and shops get busier, there will not be much change in this market.

**Pig Iron**—There is no new feature in the pig iron market, which still continues dull. The change in price noted last week still holds, with no new change.

"Disc." No. 1..... \$17.50 delivered Montreal.  
"Dom." No. 1..... 18.50 "

Usual difference in price for lower grades

Ferrona No. 1..... \$18.00 delivered Montreal  
" No. 2..... 17.50 "  
" No. 3..... 16.50 "  
" No. 4..... 16.00 "

Londonderry, \$18.50 to \$19.00 delivered Montreal  
Summerlee..... 18.50 "  
Glengarnock..... 20.00 "  
Gartsherrie..... 19.25 "  
Cambro..... 18.50 "  
Carron No. 1..... 19.00 "  
" (special)..... 17.50 "  
Ayresome No. 1..... 17.50 "  
" No. 3..... 16.00 "  
Clarence No. 1..... 16.25 "  
" No. 3..... 16.00 "

**Bar Iron**—An active market is reported. It was noted last week that there was a slight weakness, with a tendency towards a change in price, which, however, has not taken place. We quote: Merchants' bar, \$1.72 1-2; horse shoe iron, \$1.97 1-2; forged iron, \$1.92 1-2; net cash 30 and 15 per cent.

**Tool Steel**—Somewhat quieter than last week. We quote the following: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

**Merchant Steel**—Merely an ordinary demand, but the outlook is much brighter than heretofore, no change in prices. Our quotations are the following: Sleigh shoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.35; machinery (iron finish), \$2; square harrow, \$2.45.

**Canada Plates**—The price of galvanized Canada plates has been reduced this week, otherwise there is no change. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized, \$4 to \$4.10; galvanized 60s, \$4; 52s, \$3.75.

**Black Sheets**—There is a considerably greater demand for black sheet this week, and as noted before, this applies particularly to importations. Prices quoted as still subject to concessions. We quote the following: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge,



\$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

**Galvanized Iron**—The Fall trade for galvanized iron seems to have commenced in earnest, and large orders are reported. We quote a slightly lower price for Comet brand this week. We quote: Queen's Head, 28 gauge, \$4.30; 26 gauge, \$4.05; 22 to 24 gauge, \$3.80; 16 to 20 gauge, \$3.70; Apollo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28 gauge, \$4.30. "Windmill Best," 28 gauge, \$4. In less than case lots, 25c extra.

**Sheet Zinc**—The market continues somewhat weaker, but prices are unchanged. We quote, case lots at \$6.25 to \$6.50, and small quantities at \$6.50 to \$6.75.

**Tin Plates**—These are no longer subject to concession and the demand continues. Cokes, \$3.75, and charcoal, \$4.

**Ingot Tin**—Is in steady demand this week, and although the market continues weaker there is no change quoted in prices. Prices are still subject to concessions for large quantities. Quotations are 30c to 30 1-2c.

**Ingot Copper**—Copper continues firm and is still somewhat scarce, although it is in good demand. Quotations are 13 1-2c to 13 3-4c. The former price being for quantities only, and is firmly held at that.

**Pig Lead**—Pig lead continues firmer, and although an advance was expected quotations remain the same. We quote: \$3.25 to \$3.35.

**Coil Chain**—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on earlots.

**Scrap Metals and Old Material**—The prices quoted for scrap metals are so low that it is believed they have now reached their lowest limit, and an advance may be looked for at any time in the near future. The general outlook is brighter, and some metals are being shipped to Great Britain. We quote: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow

brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$12; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

### ONTARIO MARKETS.

Office of Hardware and Metal,  
10 Front Street East,  
Toronto, Aug. 19, 1904.

**B**USINESS is now beginning to pick up. The holiday season is nearing its close, and everyone is now getting back to business. The Fall trade gives promise of being bright.

Sporting goods are coming to the front. The demand is increasing each week. It is said that there is likely to be a shortage of shotguns this Fall. The factories have all the orders they can fill.

The wire nail situation shows no change this week. Prices are still being cut and it is hard to say what the result will be.

The season for binder twine is now about over, and there is quite a falling off in demand.

Wholesale houses are beginning to stock skates and Winter sporting goods.

**Shot Guns and Rifles**—This line is the feature of the Fall trade, and the demand is now good, and is increasing each week. It is thought by some dealers that there will be a shortage in shotguns this Fall. Manufacturers are said to have all the orders they can handle.

**Ammunition**—The demand is increasing, and there is likely to be a good trade this Fall. Quotations are: Rim fire cartridges, 30 and 2 1-2 discount from list; centre fire, 5 per cent. advance on list.

**Harvest Tools**—A steady demand keeps up.

**Washing Machines**—There is very fair demand for this line. We quote: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowsell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

**Woodenware**—Reduced prices hold, and a very fair business is being done. Quotations are as follows: Tubs, No. 0, \$11.25; No. 1, \$9.00; No. 2, \$8.00; No. 3, \$7.00; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2.00; clothes pons, 5 gross cases (full count), 60c; 4 dozen packages (12

to case), 75c; 6 dozen packages (12 to case), 95c.

**Steel Track Door Hangers**—There is little change in the situation. Business is very fair for this season.

**Chain**—The demand is fair. Prices are quoted as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

**Step Ladders**—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

**Barb Wire**—The season for barb wire is now closing, and there is a falling off in demand noticed each week. However there is some business still being done. We quote as follows: \$2.75 per 100 lbs. f. o. b. Toronto and \$2.50 f. o. b. Cleveland. Carlots of 15 tons, \$2.40 f. o. b. Cleveland.

**Galvanized Wire**—A fair trade continues at unchanged prices. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, No. 14, \$3.70. In carlots f.o.b. Cleveland, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs. extra charged.

**Coiled Spring Wire**—There are sorting orders coming in all the time. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

**Wire Nails**—The situation on this market still continues in its unsettled state. Dealers have come to no agreement, and price cutting is still going on. At present there seems no prospect of the situation being relieved. Nails are being sold at all prices. Standard quotations are: \$2.45 per keg f.o.b. Toronto, with carlots \$2.40.

**Cut Nails**—A moderate trade doing, with prices steady at \$2.30 per keg f. o. b. Toronto and Hamilton.

**Horseshoes**—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20;



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CANADIAN, ENGLISH,  
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FIRE BRICKS, FIRE CLAY,  
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Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

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MIDLAND, ONT

Limited

We invite inquiries for

## Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,  
CANADA PLATES, TINPLATES, WIRE ROPE  
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS  
ORE BAGS, GRAIN BAGS, ETC.

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Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,  
and LIVERPOOL, ENGLAND.

featherweight, all sizes, 0 to 4, \$5.50;  
toe weight, all sizes, 1 to 4, \$6.75. If  
shipped from factory 15c less.

**Horsenails.**—Business is fairly good  
in this line. Prices remain unchanged.  
Quotations are: "C" brands, 40  
10 and 7 1-2 per cent.; other brands 55  
and 57 1-2 per cent.

**Screws.**—A very steady demand keeps  
up. Prices are unchanged. We quote:  
Flat head bright, 87 1-2 per cent. dis-  
count; round head bright, 82 1-2 per  
cent.; flat head brass, 80 per cent.;  
round head brass, 75 per cent.; round  
head bronze, 70 per cent.; flat head  
bronze, 75 per cent.

**Rivets and Burrs.**—A steady and brisk  
demand continues. Prices remain un-  
changed. We quote: Iron rivets, 60 and  
10 per cent. discounts; iron burrs, 55 per  
cent.; copper rivets, with usual propor-  
tion of burrs, 45 per cent.

**Bolts and Nuts.**—A very fair demand  
is reported by all dealers. Prices are  
steady. We now quote: Carriage bolts,  
common (\$1 list), 3-8 diameter and  
smaller, 60 and 10 per cent.; 7-16 and  
up, 55 and 5 per cent.; carriage bolts,  
full square (\$2.40 list), 60 per cent.;  
carriage bolts, Norway iron (\$3 list),  
60 per cent.; machine bolts, 3-8 and less,  
60 per cent.; 7-16 and up, 55 and 5 per  
cent.; coach screws, cone points, 70 and  
5 per cent.; plow and blank bolts and  
bolt ends, 55 and 5 per cent.; sleigh-  
shee bolts, 70 per cent.; nuts, hex., all  
sizes, 4 1-4c per lb.; square, 4c per  
lb.

**Cordage.**—The season for binder twine  
is about over, and the demand is of  
course very slack. Quotations are un-  
changed. We quote as follows: Sisal,  
10 1-4c; standard, 10 1-4c; standard ma-  
nila (550 feet), 11 1-4c; manila  
(600 ft.), 12 1-4c; pure manila (650 ft.),  
13 1-4c. Five-ton lots 1-8c less. Carload  
lots 1-4c less. Prices on other lines are  
as follows: Pure manila, 14 1-2c; Brit-  
ish pure manila, 11 1-2; sisal, 11  
double lath yarn, 10 1-2c; single lath yarn,  
10c; double shingle yarn, 10 1-2c; single  
shingle yarn, 10c; sasheord, "Hercules,"  
30 to 32c; "Star," 36 to 38c; cot-  
ton rope, 3-16 inch and up, 20 1-2  
to 22c; 5-32 inch, 25 to 27c; 1-8 inch,  
25 to 28c; cotton twine, 3 ply, 24c; 4  
ply, 29c; calking cotton, 16 1-2 to 17c;  
cotton waste, colored, 6 3-4c; white, 11  
to 13c.

**Building Paper.**—During the week the  
demand for building paper has been  
good. Trade is briskly moving along in  
order to meet the demand such as this

## Tinned Sheets Tinplates Canada Plates Polished Sheets

ETC., ETC.

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It works of iron and  
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R. McDougall Co.,  
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HIGH SPEED STEEL

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for Tools of all kinds.

"B.C." Miners' Drill Steel

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## NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

## Ferrona Pig Iron

And SIEMENS MARTIN

OPEN HEARTH STEEL



season alone is noted for. Prices are unchanged. Our quotations are: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

**Fire Bricks**—During the week under review the demand for fire bricks has weakened. This is probably caused by the Builders' Laborers' strike. The fall in the demand does not affect quotations. Our quotations are as follows: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade, 32 1/2 to 40c.

**Cement**—As regards to local trade the market is very quiet this week. This result is caused by the Builders' Laborers' strike. Prices have not yet been affected though if this strike continues for a month or so we may look for a slight slump in the price of Canadian and American Portland. We quote the following: Canadian Portland, \$1.70 to \$2; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2; ex-store; American Portland, \$1.80 to \$2.10 f.o.b. Toronto.

#### METALS.

Conditions on the metal market show little change since last week. The market is experiencing its usual mid-summer dullness, but things are more stationary this Summer than usual. The Fall metal market depends to a large extent upon the crops throughout Ontario and Manitoba, and since the outlook is for good crops, the future metal market will probably be quite bright.

**Pig Iron**—Middlesboro in England has advanced and is firm. However this has not affected the local market to any great extent, except perhaps to give it a slightly firmer tendency. Pig iron is being bought in carlots. There is very little doing on the market, it exhibiting the usual mid-summer quietness. Prospects are good for Fall trade, however. Quotations are unchanged as follows:

|                              |                  |
|------------------------------|------------------|
| Middlesboro, f.o.b., Toronto | \$18 70          |
| Hamilton, No 1               | \$17 50 to 16 75 |
| " No 2                       | 17 00 to 17 20   |
| " No 1, Hamilton             | 16 25 to 16 55   |
| Midland, No 1                | 17 50 to 17 70   |
| " No 2                       | 17 00 to 17 20   |
| " No 1 f.o.b. Midland        | 16 00 to 16 55   |
| Radnor, f.o.b. furnaces      | 27 05            |
| Londonderry, f.o.b. furnaces | 16 50 to 17 05   |

**Bar Iron**—A good business is being done, and prices are firmly maintained. We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet

## Standard Light Producers

**Banner Cold Blast Lanterns.**

**Climax Tubular Safety Lanterns.**

**Safety Wall Lamps.**

**Banner Lamp Burners.**

**Shelby Incandescent Lamps.**

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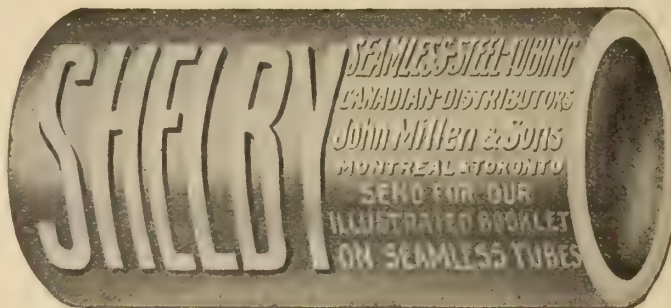
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and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

**Steel**—A very good demand is reported, and prices are steady. Quotations as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

**Tin**—Prices remain unchanged. The market is quiet. Quotations are from 30c to 31c.

**Galvanized Sheets**—There is a very fair demand. The margin, however is very close. We quote as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

**Tin Plates**—There is a very good demand, with prices unchanged. Stocks are light. We quote the following: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

**Canada Plates**—There is an improv-



ing demand. Prices are unchanged. We quote: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

**Copper**—Ingot copper is quiet, but sheets active. Prices are steady, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

**Brass**—Conditions are unchanged. There is a fair demand, with discount steady at 15 per cent.

**Lead**—There is a good demand with prices very firm. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

**Zinc Spelter**—There is a stronger demand. Buying is active at 5 3-4 to 6c per lb.

**Solder**—There is a fair trade. Prices are 1-2c lower. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

**Antimony**—Market is quiet. Quotations are: 7 1-2 to 8c per lb.

**Old Material**—The market for old material still continues dull. The market for old iron is practically dead. The demands for brass are easily filled. Heavy red brass has slumped 1-4c per lb., while heavy yellow brass has slumped 1-2c per lb. Scrap zinc has freshened up, and is now going at 31-4c per lb. Other prices on the list remain the same. We quote: Heavy copper and wire 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 9c per lb.; heavy yellow brass, 7 to 7 1-2c lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.20 to \$2.40 per cwt.; scrap zinc 3 1-4c per lb.; iron, No. 1 wrought, \$8 to \$9; No. 2 wrought, \$2; machinery cast scrap, \$11; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 4 to 4 1-2c per lb.; country mixed rags, 60c per 100 lbs.

**Petroleum**—This market continues the same. During this week trade has been very brisk. Prices remain unchanged. Our quotations are as follows: Canadian water white, 17 1-2c; Canadian prime white, 16c; American water white, 18 1-2c, ex-warehouse.

#### Hides, Tallow, Skins and Wool.

As a result of the wool market being at a standstill people who have been holding on to their wool are now offering freely. During the week under review hides have become more plentiful. Lamb skins have advanced 5c, while shearings have advanced 10c; otherwise there are no changes. We quote:

#### HIDES

|                       |      |
|-----------------------|------|
| No. 1 green, per lb.  | 0 08 |
| " 2 " steers, per lb. | 0 05 |
| " 1 " " "             | 0 04 |

#### CALFSKINS.

|                                      |      |
|--------------------------------------|------|
| Veal skins, No. 1, 6 to 10 inclusive | 0 08 |
| " " " 11 to 15 to 20 lb              | 0 05 |
| " " " 2                              | 0 04 |
| Deacons (dairies), each              | 0 63 |
| Sheepskins                           | 1 00 |
| Lamb skins                           | 0 85 |
| Shearings                            | 0 55 |

#### TALLOW.

|                          |      |
|--------------------------|------|
| Rendered Tallow, per lb. | 0 04 |
|--------------------------|------|

#### WOOL.

|                                |      |      |
|--------------------------------|------|------|
| Unwashed wool, per lb.         | 0 11 | 0 13 |
| Fleece wool, new clip, per lb. | 0 12 | 0 20 |
| Pulled wool, super, per lb.    | 0 19 | 0 21 |
| " " extra                      | 0 21 | 0 23 |

#### TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence to **HARDWARE AND METAL**  
Vancouver, B.C., Aug. 12, 1904.

THE hardware trade continues active, with nothing out of the ordinary to record. During July and the first part of the month of August building was a little light, owing, no doubt, to the fact that so many people go out camping or go to the numerous Summer resorts along the coast. Now they are returning, and the demand for houses is good. Building is still proceeding briskly, and in addition to numerous residences in course of construction, some large business blocks have been started. The new Government post-office will also be begun this Fall, which will mean considerable trade in local circles. This building will cost when completed, \$300,000.

There is also a fair demand for mining and lumbering machinery. Hydraulic mining is carried on to a large extent in the north, and most of the machinery is supplied from Vancouver foundries and machine shops. Sawmill machinery is the staple in the interior, where that industry is particularly active at present. The Waterous Company has completed several large contracts of installing plants in new mills, and in every instance the management took occasion to express their entire satisfaction with the work and with the plant. Americans try hard to work in machinery of this class, and it is pleasing to note that Canadians can supply what is requisite, some of it even to Americans who have come from the other side to engage in the industry.

Heavy quartz mining machinery is now being imported into the Yukon, the first having been taken in a week or two ago. It was for the Violet group of quartz properties on Eldorado, the



#### CROSSES AND FINIALS

We make a most extensive variety of these ornamental lines—adaptable to all requirements of artistic finish.

Made of copper or galvanized steel in most gracefully pleasing designs—they are both reliable and economical.

A full set of illustrations shown in our catalogue.

#### THE METALLIC ROOFING CO.,

WHOLESALE MANFRS. LIMITED,  
TORONTO, CANADA

shipment consisting of twenty boxes of material, including air compressors, hoist, etc. Another significant shipment of mining equipment was in the form of 240 tons of large iron pipes for the North American Transportation and Trading Company's placer concession on Miller Creek. The Yukon has many quartz properties, and the demand for machinery should be good from now on. Most of the prospecting has been done, and work of development is now about to proceed. Since the dredge on Stewart River, installed by Mr. William Ogilvie's company, has proved successful, there may also be other dredges put into the creeks.

• • •

The new wharf which is being built for the C.P.R. at Victoria by Armstrong & Morrison, of this city, will be large enough to accommodate six of the company's coasting steamers. The piles used in the construction are to be treated with a German composition, carbolineum, manufactured in Vancouver. Six coats of this have to be applied and then a coat of tar is placed over all. The surface of the timber is first cut before the carbolineum is applied, so that the composition may thoroughly penetrate the wood. When the piles are finished they are proof against barnacles and the top, it is claimed, will decay before that portion beneath the water deteriorates.



The Western Engineering Company, of San Francisco, is having a new dredge built at Alhambra, the machinery for which is to be got from the east. The 200,000 feet of lumber necessary in its construction is being got ready by the Shawnigan Lake Lumber Company, of Victoria, and some of the first timbers are ready for shipment north. These are beautiful specimens of the British Columbia fir. There are ten sticks, each specially selected and are immune from knots and other defects. They are 86 feet in length, and 30 inches square. A Philadelphia company, of which Mr. W. J. Robinson is at the head, is the company for which the dredge is being built, they already having one installed, which proved a success. Others may also be constructed.

\* \* \*

Wooden water pipe is becoming a feature in the West where magnificent timber allows the construction of an article that is perfect in its way. Since the Pacific Coast Pipe Company, of Seattle established its branch factory and offices in Vancouver, its business in the province has increased steadily. The company has several contracts on hand now, one of which is the manufacturing of over a mile of 18-inch for the Britannia mines, which is putting in a compressor plant, and wants water brought from a considerable distance. Another is the supplying of the pipe requisite for the waterworks system for the new town of Coleman, created by the establishment of the industry of the International Coal and Coke Co., in which Mr. A. C. Flumerfelt and Mr. S. H. C. Miner are interested. This pipe is said to be as satisfactory as iron, besides being of more convenience in the handling and less costly.

A self-oiling sheave block, invented by Mr. H. Gilley, of New Westminster, has received a Canadian patent. It is especially designed for use in sustaining the wire rope of a log haul, the heavy long sustained work of which rapidly wears out a sheave of ordinary construction. The cast iron sheave has a chilled groove and is cast on an axle of reeled steel, which runs in lapped bearings in wrought iron or cast steel side plates of special design to suit the requirements and having oil cups for purposes of lubrication.

The Kootenay Steam Laundry Co., of Nelson, in which Mr. Larson is senior partner, has installed a \$9,000 plant, and employs 20 men and women.

The new bronze posts for the Canadian-American boundary survey in the north are being manufactured in St. John. An equal number is being manufactured by both Governments.

The De Lano-Osborn Engineering Co., of Montreal, had personal supervision of the shop and mill inspection of all the steel work of the new Government bridge across the Fraser, recently completed.

### PITTSBURG METAL MARKETS

From the Iron Trade Review, Aug 18 1904

WHILE the leading steel manufacturers insist that nothing better than the association price on billets is being named, it is well understood that \$21 Pittsburg can be done on either Bessemer or open hearth, and one local concern will take any reasonable tonnage of either grade of billets at \$20 Pittsburg. This is getting down pretty close to the cost of the billets to the Pittsburg Steel Co., and an official announcement of a reduction by the association is expected almost daily. On the other hand it is almost impossible to shade the price of sheet bars. Independent manufacturers have been attempting to place large tonnages during the week at reduced prices, but none of the mills would name anything below the agreed quotations. The leading steel producers have the sheet and tin bar situation under control much better than billets, as the number of mills producing sheet bars is small and only a few concerns outside of the association have this material to offer. Another meeting of the investigating committee of the billet association was held in this city yesterday and at its conclusion it was stated that billet prices remain unchanged. While some interests are attempting to convey the impression that the conversion deal made by the Republic Iron & Steel Co. has created no disturbance, just the opposite is the case.

While other markets report increased demand and buying in foundry and forge grades, the local market continues exceedingly quiet. One inquiry for 1,000 tons of foundry iron on which bids have been in for more than a week has not yet been placed. Another general inquiry is out for 1,200 tons of foundry, while one of the largest foundries in this district purchased 500 tons of Bessemer this week for August and September delivery at \$12 at the furnace. On forge iron, \$12 Pittsburg continues to be done, while basic is quoted at \$11.75 at the furnace. Number 2 foundry iron is held at prices ranging from \$12.60 to \$12.85. For the

present at least, there is nothing in the demand to warrant any advance in the iron market. While producers are holding out for somewhat higher prices for future delivery, actual transactions invariably continue to be based on the lower prices which have been prevailing for the past two weeks.

In finished lines the market shows little improvement. Reports of shading on plates and structural steel continue to be received. That concessions are being made is certain, but all the sales continue to be reported to the associations at the regular quotation. On iron bars 1.25c Pittsburg can be readily done, but steel bar quotations continue to be well maintained. The market on sheets is somewhat firmer, but all business continues to be closed on the basis of 2.10c for 28 gauge. The demand for wire and wire nails has improved considerably. While one of the leading wire interests reports that its "official" price has not been changed, the fact remains that \$1.80 is the base to jobbers.

**Pig Iron**—The local market continues quiet, the transactions outside of the additional Pennsylvania tunnel business being few and of limited tonnage. The asking prices on all grades of iron are somewhat higher than have been ruling, but actual transactions are on the basis of prices prevailing in the past two weeks. On Bessemer iron for delivery the remainder of this month and September, \$12 at the furnace can be done, while on forge \$11.15 at the furnace is freely offered. Basic is offered at \$11.75 and No. 2 foundry at \$11.75 to \$12. While the Southern furnaces are asking \$9.50 Birmingham for No. 2, \$9.25 can still be done.

|                                |            |         |
|--------------------------------|------------|---------|
| Bessemer, Valley .....         | \$12 00 to | \$12 25 |
| Bessemer, Pittsburg .....      | 12 85 to   | 13 10   |
| No. 1 Foundry .....            | 13 00 to   | 13 25   |
| No. 2 Foundry .....            | 12 65 to   | 12 85   |
| Gray forge, Pittsburg .....    | 12 00 to   | 12 15   |
| Chilled basic, Valley .....    | 11 75 to   | 11 95   |
| Chilled basic, Pittsburg ..... | 12 60 to   | 12 75   |

**Steel**—Bessemer billets are now quoted on the basis of \$21 Pittsburg for delivery extending through the remainder of the year, and it is probable that \$20 could be done on a desirable tonnage. On sheet bars it is practically impossible to shade the agreed prices. The sheet and tin bar situation is well in hand and is being well controlled, thus compelling the independent sheet and tin plate manufacturers to pay official prices. Agreed prices, at which practically no billets are sold, and which only establish a basis for present prices of finished materials are as follows: Bessemer and open hearth billets, 4x4 in., and slabs up to and including 0.25 carbon, \$23 Pittsburg, Wheeling, Valley, Johnstown, Ashland, Ky., Ironton, O.,



and Lorain, O., 0.26 and including 0.60 carbon, \$1 advance, and 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 3½ inches and sheets and tin bars are \$1 per ton extra. Bessemer and open hearth rods are quoted at \$28 to \$28.50 Pittsburg.

**Plates**—Concessions on plates continue to be reported, but the associations still continue to name agreed quotations. On sizes up to 60 inches the agreed prices are shaded from \$4 to \$5 per ton. Leading plate consuming interests are not favorable to closing contracts at prevailing prices and intimate that concessions must be made in order to retain their trade. Agreed prices are as follows: Tank plates, 1-4 inch thick, and up to 100 inches in width, 1.60c at mill, Pittsburg; flange and boiler steel, 1.70c; marine, ordinary firebox, A.B. M.A. specifications, 1.80c; still bottom steel, 1.85c; locomotive firebox not less than 2.10c, and it ranges in price to 3c. Plates, more than 10 inches, 5c extra 100 pounds. Plates 3-16 inch in thickness, \$2 extra; gauges Nos. 7 and 8, \$3 extra. These quotations are based on carload lots with 5c extra a hundred pounds for less than carload lots. Terms, net cash in 30 days.

**Bars**—Iron bars are now freely quoted at 1.25c Pittsburg, although the leading iron producing interest is holding out for 1.30c. Little new business is being placed either in iron or steel bars and local mills have greatly curtailed their output. We make the following quotations: Bar iron, 1.25c to 1.30c Pittsburg for local delivery, while for Western shipments quotations are based on 1.25c to 1.35c Pittsburg. Hoops are held at 1.55c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open hearth, 1.40c, plow beams and cultivator beams, 1.35c net; channels, angles, zees and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 pounds of a size, not less than 1,000 pounds, 10 cents advance; less than 1,000 pounds of a size, 30 cents advance.

**Sheets**—The market on black sheets is somewhat firmer, 2.10c being the bottom for 28 gauge. Considerable shading is reported on galvanized and new business is light. We make the following quotations on black sheets, one pass: No. 8, 1.60c; No. 9, 1.56c; Nos. 12 to 14, 1.70c; Nos. 15-17, 1.75c to 1.80c; Nos. 18-21, 1.85c to 1.90c; Nos. 22-24, 1.95c; Nos. 25-26, 2c; No. 27, 2.05c; No. 28, 2.10c

to 2.15c; No. 29, 2.35c to 2.40c; No. 30, 2.50c to 2.55c. Galvanized: No. 12-17, 2.20c to 2.25c; Nos. 18-21, 2.35c to 2.40c; Nos. 22-24, 2.50c to 2.55c; Nos. 25-26, 2.65c to 2.70c; No. 27, 2.90c; No. 28, 3.10c; No. 29, 3.45c to 3.50c; No. 30, 3.85c to 3.90c.

**Wire and Wire Nails**—A better demand for nails and wire products has been created by the establishment of the new quotations, and a large Fall trade is anticipated by the jobbers and manufacturers. As a rule, the jobbers have little on their floors and will be compelled to buy heavily to replenish their stocks. We make the following quotations: Wire nails, carload lots to jobbers, f.o.b. cars Pittsburg, \$1.80 base; plain wire, carload lots, \$1.70 base; barbed wire, carload lots, \$2.10 base; staples, carload lots, \$1.95 keg. Galvanized 50 cents extra. Carload lots to retailers are held at 5 cents advance in all lines, and on less than carload lots a further advance of 10 cents is charged. Steel and iron cut nails, carload lots, \$1.70, and less than carload lots, \$1.75 f.o.b. Pittsburg, plus freight to point of destination. Terms, 60 days, less 2 per cent. off in 10 days.

**Old Material**—Heavy melting stock continues to be held at \$11.50 Pittsburg by the dealers, in whose hands a large portion of the available tonnage has fallen. The large local steel interests also have large tonnages stocked, but are holding the same, preferring to use it themselves later than sell at the low prices now offered. Little scrap of any grade is moving and prices vary largely for this reason.

**Coke**—The coke market has stiffened somewhat, and while it was possible to do \$1.35 last week for good Connellsville furnace coke for immediate shipment, the operators are now asking \$1.40 and \$1.45 for delivery the remainder of the year. The non-Connellsville product of course can be had as low as \$1.25, while this grade of coke for the foundry trade is selling as low as \$1.60. The Connellsville product is being sold at \$1.85 to \$1.90, and several operators are securing over \$2. In the two regions about 11,000 ovens continue idle, although a number are preparing to resume. During the week ending August 6, the production of the upper region reached 155,079 tons, while that of the lower region amounted to 155,338 tons.

## THE PLACE AND THE MAN.

**S**UCCESS in business depends more upon the merchant than upon the location of his store. There may be exceptions to this, but this seems to be the rule. Two instances in proof of this assertion come to mind. In a certain city there was a dry goods store kept by three maiden ladies. The store was on the corner of a thickly populated part of the city. The windows were always crowded and the store was always dark and dingy, while the floor was several inches below the sidewalk. The business was what might be termed a two-penny ha'penny one, and only enabled the owners to eke out a bare existence. One after the other the proprietors died and the store finally fell into the hands of a young man who had business ideas. The windows were properly dressed after that and it was not long before other changes were made in order to give the store a more modern appearance. That is not so many years ago and to-day it is one of the most successful of the smaller class of department stores in that part of the country. The windows are modern in every respect and the store is well lighted by day as well as by night. Price cards are freely used and the columns of the local newspapers are liberally patronized. If the original owners were to come back to the old scene they would be prostrated with astonishment at the innovations which have taken place.

## CANADA AT ST. LOUIS.

**S**OME people have been heard to pass uncomplimentary remarks on the Canadian exhibit at St. Louis. "Unworthy," and "inadequate" are terms occasionally heard. But, notwithstanding, the Canadian exhibit is doing a good work and the genius who arranged it, deserves the thanks of the country for the results which are now beginning to be felt.

What chiefly merits praise is the remarkable arrangement at the rear of the Canadian Building. Here is located a well-lighted picture gallery, illustrating the career of the new settler in the North West. First is to be seen a painting of the pioneer, breaking his first furrows. By easy stages, the spectator watches the progress of the man, as he brings his farm into order, builds his home, and settles down to a life of pleasant exertion. It is a regular panorama and it is all true.

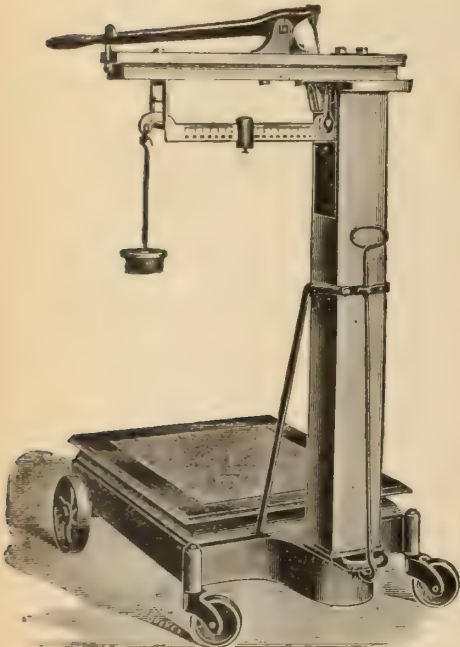
And now comes the crowning triumph of genius. As the pleased spectator turns away from the final picture, he walks directly into,—an immigration office. Already many an American farmer has studied the pictures, has passed into the immigration office, picked out a location in Canada and made arrangements for transportation. Truly the work of the Canadian Commission has not been in vain.



## HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL  
Room 308 McIntyre Block,  
Winnipeg, Aug. 15, 1904.

# The Burrow, Stewart & Milne Co.'s "Champion Jewel" Scales



FITTED WITH SWIVEL CASTERS.

Can be turned without lifting in their own length, even when heavily weighted.

Far Superior to any Truck or Wagon scale (the weighing results of some of which are little better than a guess).

Thoroughly reliable and accurate.

WRITE FOR PRICES AND DETAILS. =

## MERRICK, ANDERSON & CO.

NORTHWEST DISTRIBUTORS,  
WINNIPEG.

THE markets are practically the same as quoted last week with little or no change of any account. We

quote:

|                          |        |
|--------------------------|--------|
| Barbed wire, 100 lb.     | \$3 15 |
| Plain galvanized, 6 to 8 | 3 39   |
| " " " " " " " "          | 2 50   |
| Plain galvanized, 10     | 3 50   |
| " " " " " " " "          | 3 10   |
| " " " " " " " "          | 3 20   |
| " " " " " " " "          | 3 90   |
| " " " " " " " "          | 4 45   |
| " " " " " " " "          | 4 60   |
| Plain twist              | 3 15   |
| Staples                  | 3 65   |
| Oiled annealed wire, 10  | 3 42   |
| " " " " " " " "          | 3 48   |
| " " " " " " " "          | 3 56   |
| " " " " " " " "          | 3 66   |
| " " " " " " " "          | 3 76   |
| " " " " " " " "          | 3 91   |

Annealed wires (uncoiled) 10c. less.

|                                         |        |
|-----------------------------------------|--------|
| Horseshoes, iron, No. 0 to No. 1        | \$4 75 |
| " " " " " " " "                         | 4 45   |
| Snow shoes, No. 0 to No. 1              | 4 60   |
| " " " " " " " "                         | 4 45   |
| Steel, No. 0 to No. 1                   | 4 45   |
| " " " " " " " "                         | 4 20   |
| Horsenails, No. 4-1 1/2 in., list price | 0 48   |
| " " " " " " " "                         | 5-2    |
| " " " " " " " "                         | 0 32   |
| " " " " " " " "                         | 0 28   |
| " " " " " " " "                         | 0 24   |
| " " " " " " " "                         | 0 22   |
| " " " " " " " "                         | 0 20   |
| " " " " " " " "                         | 0 20   |
| " " " " " " " "                         | 0 20   |
| " " " " " " " "                         | 0 20   |
| " " " " " " " "                         | 0 20   |
| " " " " " " " "                         | 0 20   |

Discount on these prices 40, 10, 7 1/2 per cent., plus 15c. per box.

Cut Nails—

|                   |        |
|-------------------|--------|
| 2d 1 in.          | \$4 10 |
| 3d Fin. 1 1/4 in. | 4 10   |
| 3d 1 1/4 in.      | 3 75   |
| 4d 1 1/4 in.      | 3 50   |
| 5d 1 1/4 in.      | 3 50   |
| 6d 2 in.          | 3 40   |
| 8d 2 1/2 in.      | 3 25   |
| 10d 3 in.         | 3 20   |
| 20d 4 in.         | 3 15   |
| 30d 4 1/2 in.     | 3 10   |
| 40d 5 in.         | 3 10   |
| 50d 5 1/2 in.     | 3 10   |
| 60d 6 in.         | 3 10   |

Wire Nails—

|           |      |
|-----------|------|
| 1 in.     | 4 15 |
| 1 1/4 in. | 4 10 |
| 1 1/2 in. | 3 70 |
| 1 3/4 in. | 3 50 |
| 2 in.     | 3 50 |
| 2 1/2 in. | 3 40 |
| 3 in.     | 3 25 |
| 3 1/2 in. | 3 20 |
| 4 in.     | 3 15 |
| 4 1/2 in. | 3 10 |
| 5 in.     | 3 10 |
| 5 1/2 in. | 3 10 |
| 6 in.     | 3 10 |

|                                                              |          |
|--------------------------------------------------------------|----------|
| Bar iron (basis)                                             | 2 50     |
| Swedish iron (basis)                                         | 4 75     |
| Sleigh shoe steel                                            | 2 85     |
| Spring steel                                                 | 3 25     |
| Machinery steel                                              | 3 50     |
| Tool steel, Black Diamond, 100 lb.                           | 8 50     |
| Jessop                                                       | 13 00    |
| Sheet iron, black, 10 to 16 gauge, 100 lb.                   | 3 50     |
| 18 to 22 gauge                                               | 3 75     |
| 24 gauge                                                     | 3 90     |
| 26 gauge                                                     | 4 00     |
| gauge                                                        | 4 10     |
| Galvanized Iron, Apollo, 16 gauge                            | 4 00     |
| 18 and 20 gauge                                              | 4 00     |
| 22 and 24 gauge                                              | 4 25     |
| 26 gauge English or 28 American                              | 4 25     |
| 28 gauge                                                     | 4 50     |
| 30 gauge or 10 1/2 oz.                                       | 4 75     |
| Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.  |          |
| Queen's Head, 24 gauge                                       | 4 25     |
| 26 gauge                                                     | 4 50     |
| 28                                                           | 4 75     |
| Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb. |          |
| Genuine Russian, per lb.                                     | 11       |
| Imitation " "                                                | 07 to 08 |
| Tinned, 24 gauge, 100 lb.                                    | 8 00     |
| 26 gauge                                                     | 8 05     |
| Tinplate, 1C charcoal, 20 x 28, box                          | 9 50     |
| " IX                                                         | 11 50    |
| " IXX                                                        | 13 50    |

|                                            |                   |
|--------------------------------------------|-------------------|
| Ingot tin                                  | 35                |
| Canada plate, 18 x 21, 18 x 24 and 20 x 28 | 3 05              |
| Canada plate, full polished                | 3 75              |
| Sheet zinc, cask lots, 100 lb              | 7 00              |
| Broken lots                                | 7 50              |
| Pig lead, 100 lb.                          | 5 50              |
| Black iron pipe, 1/4 inch                  |                   |
| " " " "                                    |                   |
| " " " "                                    | 2 80              |
| " " " "                                    | 3 25              |
| Black iron pipe, 1/2 inch                  | 4 20              |
| " " " "                                    | 5 85              |
| " " " "                                    | 8 20              |
| " " " "                                    | 10 00             |
| " " " "                                    | 14 00             |
| Rope, sisal, 7-16 and larger, basis        |                   |
| Manila, 7-16 and larger, basis             | 15 25             |
| Lath yarn                                  | 11 25             |
| Solder                                     | 20                |
| Axes, chopping                             | \$ 6 75 to 12 00  |
| " double bitts                             | 12 00 to 18 00    |
| Bluestone                                  | 5 25              |
| Screws, flat head, iron, bright            | 85 and 10 p.c.    |
| Round " "                                  | 80 p.c.           |
| Flat " brass                               | 75 and 10 p.c.    |
| Round " "                                  | 70 and 10 p.c.    |
| Coach                                      | 70 p.c.           |
| Bolts, carriage, 3/4 or smaller            | 60 and 5 p.c.     |
| " " 7-16 and up                            | 55 p.c.           |
| Bolts, machine, 3/4 and under              | 55 and 5 p.c.     |
| " " 7-16 and over                          | 55 p.c.           |
| Bolts, tire                                | 60 and 5 p.c.     |
| Bolt ends                                  | 55 and 5 p.c.     |
| Sleigh shoe bolts                          | 70 p.c.           |
| Machine screws                             | 70 p.c.           |
| Plough bolts                               | 55 and 5 p.c.     |
| Square nuts, case lots                     | 3c. discount.     |
| " small lots                               | 2 1/2 c.          |
| Hex " case lots                            | 3c.               |
| " " smaller lots                           | 2 1/2 c.          |
| Rivets, iron                               | 50 and 10 p.c.    |
| Copper, No. 8                              | 3a                |
| " No. 12                                   | 36                |
| Coil chain, 3-16 inch                      | 9 1/2             |
| " " 1/4 inch                               | 7 1/2             |
| " " 5-16 inch                              | 5 1/2             |
| " " 3/4 inch                               | 5 1/2             |
| " " 7-16 inch                              | 4 1/2             |
| " " 1/2 inch                               | 4 1/2             |
| " " 1/4 and 1/2 inch                       | 4                 |
| Spades and shovels                         | 40 and 5 p.c.     |
| Harvest tools                              | 60 p.c.           |
| Axe handles, turned, s.g. hickory, doz.    | \$3 15            |
| No. 1                                      | 1 90              |
| No. 2                                      | 1 60              |
| Octagon extra                              | 2 30              |
| No. 1                                      | 1 60              |
| Files common                               | 70 and 10 p.c.    |
| Diamond                                    | 60 p.c.           |
| Building paper:                            |                   |
| Anchor, plain                              | 65c.              |
| " tarred                                   | 70c.              |
| Pure fibre, plain                          | 67 1/2 c.         |
| " " tarred                                 | 80c.              |
| Ammunition, cartridges, Dominion R.F.      | 50 p.c.           |
| Dominion, C.F., pistol                     | 30 p.c.           |
| " military                                 | 15 p.c.           |
| American R.F.                              | 30 p.c.           |
| C.F. pistol                                | 5 p.c.            |
| C.F. military                              | 10 p.c. advance   |
| Loaded shells:                             |                   |
| Eley's soft, 12 gauge black                | 15 00             |
| chilled, 12 gauge                          | 16 00             |
| soft, 10 gauge                             | 18 00             |
| chilled, 10 gauge                          | 19 00             |
| Shot, Ordinary, per 100 lb                 | 6 00              |
| Chilled                                    | 6 55              |
| Powder, F.F., keg                          | 4 70              |
| F.F.G.                                     | 5 00              |
| Tinware, pressed, retinned                 | 70 and 10 p.c.    |
| " " plain                                  | 75 and 2 1/2 p.c. |
| " " pieced                                 |                   |
| Japanned ware                              | 37 1/2 p.c.       |
| Enamelled ware, white                      | 45 p.c.           |
| " Famous                                   | 50 and 10 p.c.    |
| " Imperial                                 | 50 and 10 p.c.    |
| Green Wire Cloth                           | 1 55              |
| PETROLEUM.                                 |                   |
| Water white American                       | 27 1/2 c.         |
| Prime white American                       | 25 1/2 c.         |



Water white Canadian..... 25½c.  
Prime white Canadian..... 24½c.

## SCRAP.

No. 1 cast iron..... \$14 to 15  
No. 2 "..... 7  
Wrought iron scrap..... 5  
Copper (heavy)..... 8¼c. per lb.  
Yellow brass (heavy)..... 7½c.  
Light brass..... 5c. to 6c.  
Lead pipe, or tea lead..... 2c. to 2½c.  
Zinc scrap..... 1c.

## PAINTS, OILS AND GLASS.

White lead..... \$6 00 to \$6 50  
Putty in bladder, 2½ lb. in keg of 100 lbs. 0 02½  
Turpentine, pure in barrels..... \$ 0 87  
Less than barrel lots..... 0 92  
Linseed oil, raw..... 0 55  
Boiled..... 0 58

## WINDOW GLASS.

Single 1st break, up to 25 miled inches. \$3.50; 24 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

Lubricating oils, heavy castor machine.... 0 29  
" " extra engine..... 0 27  
" " dynamo..... 0 35  
" " black..... 0 22  
" " cylinder..... 0 50 to 0 75  
(as to quality)

Harness oil..... 0 50 to 0 60  
Neatsfoot oil..... 1 00  
Vegetable oil, 1st pressure..... 1 00½  
" 2nd pressure..... 1 09½

## LONDON METAL MARKET.

From The Metal Market Report, August 17, 1904.

**Pig Iron**—Scotch warrants Glasgow closed at 5s., being the same as last issue. Middleboro No. 5 foundry closed at 43s 6d the same as last week.

**Tin**—Spot tin opened easy at £1/1 10s, futures £122 2s 6d and after sales of 150 tons of spot and 50 tons of futures closed quiet at £121 10s for spot and £122 5s for futures, making price as compared with last issue 5s lower for spot and 2s 6d lower for futures.

**Copper**—Spot copper opened firm at £57 2s 6d; futures £57 3s 9d, and after no sales of spot and 100 tons of futures, closed firm at £57 2s 6d for spot and £57 3s 9d for futures, making price as compared with last week 12s 6d higher for spot and 12s 3d higher for futures.

**Lead**—The market closed at £11 16s 3d, the same price as last week.

**Spelter**—The market closed at £22 making price as compared with last week 7s 6d higher.

## BRASS WORKS OPENED.

On August 16 the Dominion Brass Works, Limited, Port Colborne, Ont., were formally opened under the most favorable auspices. The representatives of the company entertained the leading citizens of the village and vicinity to a luncheon, at which more than 250 guests were present. After the luncheon the machinery of the plant was set in motion by the manager.



**City Boys and Country Boys**  
CAN USE OUR  
"PEERLESS HAMILTON" RIFLES  
No. 15, 22 Caliber, \$2.00  
No. 19, 22 Caliber, \$2.50

Rifles are fully guaranteed against defects.  
Constructed of steel throughout.  
We provide pamphlets for free distribution.  
Send for circular and price list.

**The HAMILTON RIFLE CO.,**  
Box No. 71. PLYMOUTH, MICH.

C. H. HENRICKS, PHILA.

## CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost must accompany all advertisements. In no case can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

## YEARLY CONTRACT RATES.

|                                       |         |
|---------------------------------------|---------|
| 100 words each insertion, 1 year..... | \$30 00 |
| " " " 6 months.....                   | 17 00   |
| " " " 3 months.....                   | 10 00   |
| " " " 1 year.....                     | 17 00   |
| " " " 6 months.....                   | 10 00   |
| " " " 1 year.....                     | 10 00   |

## SITUATIONS VACANT.

**MANAGER**, traveller or assistant—thorough knowledge hardware, paints and colors; 20 years' experience; thoroughly energetic; very smart salesman, total abstainer, age 35, highest credentials. "Dominion," HARDWARE AND METAL Montreal. (34)

**MANAGER**, thorough knowledge hardware, 20 years' varied experience, used to organization and administration of a large corporation; undoubted ability; total abstainer; age 35. "Independence," HARDWARE AND METAL, Montreal. (34)

**WANTED**—Tinsmith, must be sober, reliable and industrious. Apply at once stating wages and references. Acer & Whedon, Medina, N.Y., U.S.A. (37)

**WANTED**—Stove plate moulders and boys to learn the moulding trade. The Gurney Foundry Company, Limited, Toronto. (37)

## BUSINESS CHANCES.

**HARDWARE** business wanted in live city or first-class town of not less than five thousand population, located in good farming community. Apply Box 146, HARDWARE AND METAL, Toronto. (25tf)

**RETAIL** hardware business for sale; one of the largest and in best location in Toronto; largely cash business; in good running order; turnover for 1903 over \$35,000; can easily be increased to \$50,000; stock and tools about \$9,000. For particulars and terms address Box 152, HARDWARE AND METAL, Toronto, Ont. (28ft)

## MECHANICS WANTED

**BLACKSMITH WANTED**—At once—must be good horseshoer. Wes. Moise, Lucknow, f

**HARNESSMAKER WANTED**—At once, good general hand. P. Fleming, Brampton, f

**TINSMITH**—With some knowledge of plumbing; state wages and experience. E. A. Havill, Walkerton.

**WANTED**—A first-class iron maker for bridge and structural iron work. Apply to The Locomotive & Machine Co., of Montreal, Limited, Montreal, P.Q. f



## PAINT, OIL AND BRUSH TRADES

### The Manufacture of Varnish.

**N**EXT to the quality and adaptability of the goods, it will be generally conceded among consumers that the most important requisite in a varnish is "uniformity" of quality; and it is in this respect that a large tankage capacity gives an advantage over smaller manufacturers. Although in the manufacture of several lots of varnish, the same formula may be used, and the same "modus operandi" adopted throughout, there is still one essential feature that must be observed to insure absolute uniformity, so far as human means will permit, and that is the time allowed for the ripening process. This is something that cannot be hurried; and the results obtained while the varnish is remaining in the tank undergoing the mysterious process of "ripening" cannot be produced by any artificial means so far discovered.

The proper time for ripening is from three to twelve months, according to the grade of varnish, so that it will be easily seen that to allow the varnish full time to ripen, and at the same time keep a supply of "ripe" varnish on hand, sufficiently large to fill all orders and to meet emergencies, demands a very extensive storage capacity, and a poor equipment in this regard must necessarily prove disastrous to the production of uniform goods, a limited storage capacity compelling varnish manufacturers to either ship unripe varnish or to refuse orders, or delay shipment until the stock ripens.

Varnish carefully and correctly made from a tested and approved formula is only half complete, and if not given the proper time to mature before shipping, will in all probability be condemned by the consumer to whom it may be shipped.

Varnish is frequently blamed for trouble which is really the result of carelessness on the part of the workmen. This will show that the trade should realize the great care taken by the manufacturers in the production of varnish. Nothing is done by guess work. Scientific rules govern throughout. Raw material and finished product are submitted to laboratory tests safe and sure

precedents have succeeded the era of experimental uncertainties, and barring accidents the manufacturers know when starting to make a tank of varnish what the result will be beyond question.

The term "Japan" was originally given to the species of varnish producing that rich, black, glossy finish that had its origin in Japan. That secretive race, however, no longer possesses the monopoly of the art of japanning, as we have long since solved its mysteries, and produce Japans as lustrous and durable as were ever made by the Japanese.

The word Japan has now a double commercial meaning, and may be roughly divided into two heads: Oil drying Japans and finishing Japans, the former being used by painters for drying paints and the latter for producing a finish on iron, wood and other surfaces.

Finishing Japans consist of two classes: Air drying Japans and baking Japans. Black is the color in most

general use, although colored Japans are frequently used for various ornamental purposes. Sewing machine castings, small hardware, tea trays, wooden handles, and many other articles of this nature are among the things that owe their brilliancy and finish to Japan.

In common with varnishes, there are many outside influences that conspire against Japan. Like varnish, Japans are susceptible to changes of temperature and should be kept and used in a warm room, never allowed to get chilled, or used in any other but its normal consistency.

The operation of baking is one requiring great care. The heat must be carefully regulated, and the conditions and capabilities of the oven and surroundings carefully considered. A too high degree of heat, improper ventilation of oven, and many other causes are enough to spoil any baking Japan ever made. —Paint, Oil and Drug Review.

Refined Gas Tar,  
Coal Tar,  
Roofing and Paving  
Pitch.



Lowest Prices.

The Imperial Varnish & Color Co.

LIMITED,

TORONTO, ONTARIO, CANADA.



# If You Buy

|           |         |
|-----------|---------|
| Varnishes | Paints  |
| Japans    | Colors  |
| Lacquers  | Glues   |
| Stains    | Bronzes |
| Fillers   | Chamois |
|           | Sponges |

WRITE TO

**R. C. JAMIESON & CO.**  
LIMITED

**MONTREAL**

AGENTS FOR ASPINALL'S ENAMEL.



## The Wearing of the Green

depends upon the kind of green used.

Wise painters, looking for brilliancy, covering power, economy and longest wear, prefer

**LUCAS**  
**Imperial French Green**

Shrewd dealers always keep it in stock, knowing "the painter who knows," will come back again.

Send for particulars

**JOHN LUCAS & CO.**  
PHILADELPHIA

NEW YORK

CHICAGO

McArthur, Corneille &amp; Co., Montreal.

# STERLING PAINTS ..

A weatherable paint for outside—  
A washable paint for indoors.  
Cover the house,

Put up in handy tins, beginning with half-pints.

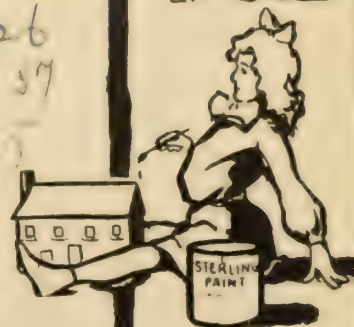
Every dealer should handle "STERLING" Paints—The paint that wears well.

RETURNED

NOV 7 1904

Cut Box 26  
Page 57  
etc.

WE COVER  
THE  
HOUSE



**CANADIAN OIL COMPANY, Limited**

T. H. HAMILTON, Manager.

Scott and Front Sts., Toronto.



## Paint and Oil Markets

### Quebec.

Office of HARDWARE AND METAL,  
132 McGill Street,  
Montreal, August 18, 1904.

**N**o great change has taken place in the paint and oil business, which continues pretty much along the same line as last week, there being in a general way a better demand than is usual at this season. Travelers are at business again after their vacation and a steadily improving trade may now be looked for. From the amount of building trade at present, there should be a good demand for all kinds of paint this fall; prices remain unchanged throughout.

**Ground White Lead**—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

**Dry White Lead**—\$4 in casks and in kegs \$4.25.

**Dry White Zinc**—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

**White Zinc (ground in oil)**—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

**Putty**—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

**Orange Mineral**—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

**Red Lead**—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

**Litharge**—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

**Turpentine**—Single barrels, 82 1-2c per gallon; two to four barrels, 81 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

**Linseed Oil**—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

**Shellac Varnish**—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

**Mixed Paints**—\$1.20 to \$1.40 per gallon.

**Castor Oil**—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

**Canadian Paris Green**—Barrels 13 1-2c; arsenic kegs 13 1-2c; 50 and 100 lb. drums, 14c; 25-lb. drums, 14 1-4c; 1 lb. packages, 15c; 1-2-lb. packages, 17c;

1 lb. tins, 16c. Terms 2 per cent., discount for cash in 30 days or 90 days net.

**English Paris Green**—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

### Ontario.

Office of HARDWARE AND METAL,  
10 Front Street East,  
Toronto, Aug 19, 1904.

**T**HE market still retains its quiet tone indicative of the holiday season. There is, however, nothing to complain of as the market is more active than usual at this time of the year. The season for Paris green is about ended, and of course the demand is now quite limited. White lead is fairly active, and considering the season the demand for mixed paints, varnishes and dry colors is quite good. Turpentine since last week has made an advance at points of production in the Southern States. The local market is in consequence very firm and there will probably be an advance within a few days. During the last two or three weeks buyers have been putting off buying, thinking that the market would come down. Instead the price has gone up and the market in the South is very firm at advanced prices. There is even

an upward tendency to it. Linseed oil is rather unsettled on the local market. There has been an advance in the seed on the Chicago market, but the oil has weakened on the English market. However a firmer feeling is expected since the crushers supplying the local market get the seed from Chicago. All quotations are unchanged.

**White Lead**—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

**Red Lead**—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

**White Zinc**—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

**Shingle Stain**—In 5 gallon lots, 60 to 85c per gallon.

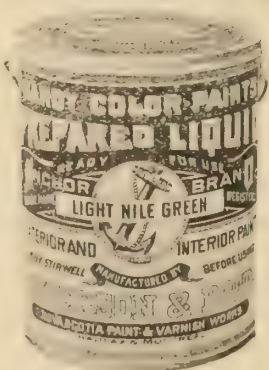
**Paris White**—90c to \$1 per 100 lb.

**Whiting**—60 to 65c per 100 lb.; Gilders' whiting, 75c.

**Shellac**—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

**Linseed Oil**—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

**Turpentine**—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per



Send us a post card  
and let us tell you  
all about them

## ANCHOR and ENGLISH

### LIQUID PAINTS

occupy a unique position among the different brands upon the Canadian market. They stand alone at the top, unrivalled for covering power, permanency of color and wearing qualities. The only white lead used in their manufacture is the best the world can produce—**Brandram's B. B. Genuine.**

HENDERSON & POTTS, Limited, Mfrs., Halifax  
HENDERSON & POTTS CO., Ltd., Mfrs., Montreal





## ALWAYS WELL PLEASED.

We make everything with such care and so good that our customers and our customers' customers are thoroughly pleased with our goods.

## SOLVO—a paint and varnish remover

The quickest, most convenient, and best manufactured, and when we say this, it is a trustworthy statement. Does not injure the hands and has no objectionable odor. Send for circular. 1/2 pts., pts., qts., 1/2 gals., gals., 5 gal. cans and bbls.

Standard Paint & Varnish Co., Limited, Windsor, Ont.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER

### BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street



WE WANT YOU  
TO TRY  
**SOLARINE**

SHALL WE SEND YOU  
SAMPLE ORDER?

—MONEY BACK—  
"SOLARINE" POLISHES

60 George St., Toronto, Ont.

## Linseed Oil

To-day's price in London is £18 1s od. I offer 50 barrels, raw, at £17 15s od, c.i.f. Montreal, which price with duty is less than 41c. per gallon. Also 50 barrels refined at £19 5s od, c.i.f. Montreal.

J. W. L.,

P.O. Box 1157,  
Montreal.

## McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES

MONTREAL

## GLUES AGAIN

Our IMITATION FRENCH MEDAL  
GLUES are of such high class

and are so suitable for Export that we would like to quote you. Export trade in this line is growing rapidly, and we pack in casks or cases as preferred. Quality unrivalled.

GRUVE CHEMICAL CO., LTD., Appley Bridge, Lancashire, Eng

TRADE



MARK

## Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

**HIGH-CLASS VARNISHES ONLY**

Which can be obtained direct from the works  
or from the principal Color Dealers in Canada



## "ISLAND CITY" PAINTS

are profit bringers for the dealer. When once introduced, they make their own way. You don't have to push them; they push themselves.

P. D. DODS & CO., Montreal, Toronto, Vancouver



# THE CANADA PAINT COMPANY LTD

## C. P. COMPANY'S

### COLORS

The colors of the CANADA PAINT COMPANY are noted for strength and fineness. That they are appreciated abroad as well as at home is shown from the fact that the CANADA PAINT COMPANY are manufacturing large quantities of painting material for the Old Country, and weekly shipments are made to the United States.

For Bridge, Girder, Elevator and Railroad work, the manufactures of the CANADA PAINT COMPANY are particularly recommended. Books of special samples will be mailed free upon request.

# THE CANADA PAINT COMPANY LTD

gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

**Glues**—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

**Putty**—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

**Plaster Paris**—New Brunswick, \$2 per barrel.

**Liquid Paints**—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

**Barn Paints**—55 to 70c per gallon.

**Bridge Paints**—75c to \$1.

**Castor Oil**—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

**English Paris Green**—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

**Canadian Paris Green** (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

### Window Glass.

MONTREAL.

The market has brightened to some extent during the present week, but can hardly be said to be active. Glass for Fall import is expected in about three weeks time, when there will be a decided change in the glass market. The prices quoted are merely nominal and we have no assurance that they are strictly followed. We quote: First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70 seventh do., \$5.20, and eighth do., \$5.70. The discount on 50 feet is 20 per cent, and on 100 feet 33 1-3 per cent. There has been no change in prices for diamond star or double thick. First break, 50 feet, \$2.30; second do., \$2.50; first break, 100 feet, \$4.40; second do., \$4.90; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

TORONTO.

Prices are quite firm, and the demand is very good. Star first break, at \$3.80 per 100 feet, and Double Diamond, first break, at \$5.06. Discount, 15 to 20 per cent. These prices are shaded on large and well assorted specifications.

## THIRTY-NINE YEARS

is a long period for the supremacy of a brand of horse nails to have been maintained. The "C" brand, made by us, has never been beaten in the test for first place by our competitors. The only Gold Medal ever awarded in Canada for Horse Nails, was granted to us in competition with the world. Such a creditable record has not been obtained without good cause.

Temporary success is comparatively easy to obtain; but for a manufacturer of horse nails to maintain the popularity of his brand year after year, as we have done since 1865, and over such a widely extended area as is comprised within the limits of the Dominion, from the Atlantic to the Pacific, it must have a more permanent basis than mere passing fancy. The "C" brand nails when used tell their own story; they represent the perfection of horse nail production. The basis of a good nail is good material. We use the best obtainable Swedish Charcoal Steel Nail Rods exclusively. This is the best material known, or used for the purpose in the world. We control absolutely the brand we use; it is made especially for our requirements.

Our nails are all hot-forged from the rods, as in the old fashioned hand hammered process, but with greater uniformity. The pointing and finishing processes are done by machinery used exclusively by our Company. All our nails are carefully hand-picked, and we claim that not a single imperfect nail is to be found in a box bearing our name and brand. They are the most economical to buy and use, because they are the best, and every box is warranted. They are not the same price as other brands; neither should you pay the same price for other brands. If you order the "C" brand do not accept substitutes at the same price. If you cannot obtain them, please inform us, and we shall see that you are supplied with them.

**Canada Horse Nail Company**  
MONTREAL



# **“EMPIRE”**

(bulk)

## **Smokeless Sporting Powder**

This European favorite, made by the Nobels', has, though but recently introduced here, taken a commanding position through its high velocity, low pressure and uniformity. “Empire” does not need a special cap.

*For sale by your jobber  
at the same price as the best  
American brands.*

### **HAMILTON POWDER CO., Agents**



# STOVES AND TINWARE

## Fall Trade Hints.

A LIVE, hard working, intelligent man can handle stove repairs so that there is good profit in them. The business simply needs industry, common sense and careful attention to accomplish the desired result. One of the first steps that many have taken in what has proved to be the right direction has been to send a circular, special card or letter to every householder or property owner in their locality asking whether or not the stove, range or furnace was capable of standing another hard Winter without repairs. This advertising has been most successful when it called attention to the need of cleaning flues in the range and renewing the smoke pipe, as well as inquired concerning the condition of the grate, the fire bricks or fire pot, and whether or not the parlor stove needed a new set of mica. Just about the time that people have ended their Summer vacation and recreation season is the time to address such circulars to them personally. Then, if a little personal canvass is made, enough business can be brought into the shop to keep several men profitably employed.

Anybody who intends to embark on such an enterprise must have qualified assistants, or trouble will soon arise. Not only will a properly organized system run smoothly and thus save a lot of work, but it is not judicious to impose upon the customers, workmen who have not been instructed in what is expected of them, or who are unprovided with a kit of tools that will enable them to do some little emergency jobs without returning to the shop. The system must begin with the taking of the orders. Some competent employe should always be in the store who is conversant with the different types of stoves that are in use in the locality, so that he may ask questions as to whether a range has a plain or triplex grate; whether the parlor stove has one or two rows of mica; whether the fire pot is fingered at the bottom or is made in two sections; whether the hot air furnace has a check draft, a clay lined fire pot, a steel radiator, etc., and so on down the line. It

is far better to send the customer back home to satisfy himself of these details before the order is placed for repairs, as they may not fit when they arrive.

It is important also that repairs shall be ordered only for customers who will pay for them and whose credit is good. Those who are uncertain pay should be made to pay something in advance. Otherwise an accumulation of stove repairs may be found at the end of the season when people have refused to take them they found out the cost, or which they have been able to get along without. It is essential that considerable care be taken in getting these orders correctly recorded in the order book. After this part of the order is done with, some method must be followed in keeping the repairs separate. A good plan is to send to the stove repair supply house tags with the name of the customer on them, with instructions to tie these tags on the goods ordered for that customer; then, when the stove repairs come in, it is a simple matter to lay them aside until the customer can be notified that they have arrived and arrange for them to be put in or called for. This precaution saves many controversies.

The men who are employed to do repair work, as has been mentioned, should have a suitable tool carrier in which a complete set of tools can be readily carried, and the man who is carrying on a stove business will do well to spend a few dollars in procuring just such a set of equipment for each one of his workmen as he would want if he was going to do the work himself. He should instruct his employes to make as little dirt as possible, and clean up whatever dirt is made whenever practicable, and, on all occasions, to be courteous and polite, regardless of the treatment they may receive from the customers who are more or less annoyed on having the work done in a clean kitchen, parlor or cellar. The man who starts out for the Fall trade by circularizing his community, and with his system organized on the lines suggested, will come nearer building up his reputation than one who takes his business on the "hit or miss" plan. Metal Worker.

## Something About Stoves..

THE Southern Stove Works, Richmond, Va., in their last catalogue, illustrate a few of the causes why the stove is condemned, when the fault is solely in the chimney, as follows:

Often complaints are made that the cook stove will not operate, although the pipe was carefully fitted into a chimney that has a good draft, and which has been in use for many years. Investigation proves that the stove is attached to a chimney whose base contains a very large, old-fashioned open fire-place.

The chimney of the kitchen may be much lower than the main part of the house. The wind blowing over the house falls like water over a dam, sometimes almost perpendicularly, on the top of the chimney; thus it beats down the smoke contained therein. The remedy is to build up the chimney, or add a smokestack to equal the height of the main building.

A building or a large tree may be near to and higher than the top of the chimney, so that the wind passing over them would blow down the chimney.

When there is more than one opening in a chimney, a great variety of complications may affect the draft. So see that all the openings into the flue, no matter of what kind, excepting the one you are going to use, are securely closed.

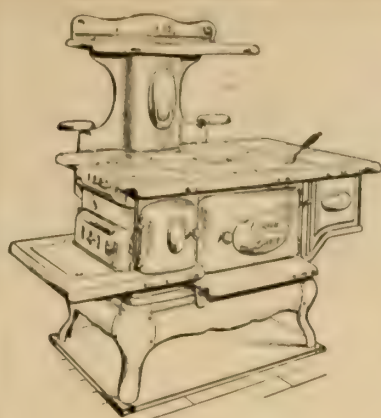
When two or more stoves are connected with one single chimney, the combination is so variable that it is difficult to cover all such cases by specific direction. Common sense, directed by observation, must be used.

A new or green chimney will never have a perfect draft. It will not draw perfectly until it is thoroughly dried, which sometimes requires two to four weeks' time.

In building a chimney, a little mortar may be dropped from time to time and lodge out of sight so as to partially close the chimney. A heavy weight may be let down by a rope and worked against the inside of the flue to force an opening.

In an old chimney the mortar may





The Empire Queen.

## IT IS IN THE DRAFT

that the works  
of a stove are.

Carving and nickel, and even good devices  
won't make a stove a good cooker.

### The Empire Queen Range

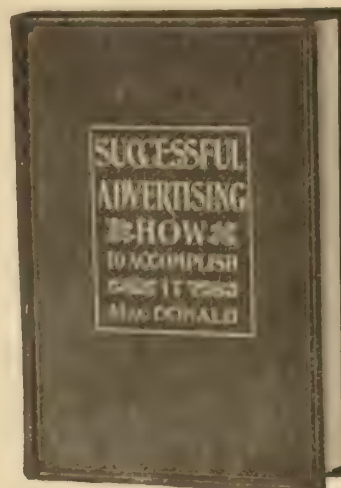
is a perfect stove, because its flues are perfect. Moreover, it is of handsome appearance, is easy on fuel and easy to keep clean.

Send for descriptive booklet

The

**Canadian Heating and Ventilating Co.,**  
OWEN SOUND, (ONT.) Limited

It is worth something,  
to you



### This Book

will be mailed, postage paid to any address in Canada  
upon receipt of price \$2.00.

Its sale in the United States has been phenomenal.

TECHNICAL BOOK DEPARTMENT  
**MacLean Publishing Co., Limited**  
10 FRONT STREET EAST :: :: TORONTO



## Kelly Warm Air Furnaces

"The Most Satisfactory Line."

IT IS A WELL-KNOWN FACT that a pleased customer is a good advertisement.

KELLY WARM AIR FURNACES are built to please the most fastidious.

They are time-tried and reliable, and are noted for accurate mechanism and perfect finish.

It will pay you to get acquainted with the "KELLY."

**ALWAYS UNDER CONTROL.  
SIMPLE—SAFE—DURABLE.  
ECONOMICAL ON FUEL.**

The KELLY is made in four sizes, with fire-pots, 17, 19, 22 and 25 inches in diameter.

**GUELPH FOUNDRY CO., Limited**  
GUELPH, ONT.

Western Representatives: Messrs. E. G. LOW & CO., Winnipeg, Man.



have crumbled from between the bricks so that it leaks air and spoils the draft.

All the air that passes through the chimney should first pass through the fire, unless used to check the draft.

# PRODUCTION OF ONTARIO MINES.

THE annual report of T. H. Gibson, Director of the Provincial Bureau of Mines, has been issued. The report shows that the mineral output of Ontario for the year is valued at \$12,-\$70,593, a decrease of about 4 per cent. over 1903.

The chief decrease is in iron and steel and this can be accounted for by the closing down of the Sault Ste. Marie industries, involving as it did the shutting down of the Helen mine, from which a large per cent. of the iron ore raised during the last four years has come, and also the closing of the Algoma Steel Works.

On the other hand the potential resources of Ontario in the iron and steel industry have been augmented by the discovery of the following iron ranges situated in widely separated portions of the province: The Michipicoton range, east shore of Lake Superior; the Hut-ton or Moose Mountain range, north-west of Lake Wahnapiatae; the Lake Temagami ranges; the Flying Post or Ground Hog river ranges; the range on Black Sturgeon Lake; and the extensive range extending from the east shore of Lake Nipigon to Little Long Lake, a distance of 70 miles.

The report indicates that the past year has been a record year for nickel and copper. When the increased facilities for mining and treating the nickel-copper ores at Sudbury come into operation, the output from this field will doubtless show a still further advance.

In the report Dr. A. P. Coleman, Professor of Geology in the University of Toronto, and mineralogist of the Bureau of Mines, presents a paper entitled "The Northern Nickel Range," dealing with the Sudbury nickel area where he has spent the last two seasons. Dr. Coleman says that the nickel bearing area is a continuous band of eruptive rock entirely enclosing a boat-shaped area composed in the main of tuffs, slates and sandstones, about 35 miles long and 8 miles wide. This nickel-bearing band on its inner edge is acid in composition and tends to phases of granite of syenite, but becomes more basic and passes into gabbro or norite as it approaches

the outer rim, where the ore bodies are found.

The figures of some of the productions are as follows: Gold, 10,383 ounces, worth \$188,036; silver, 16,688 ounces, worth \$8,949; copper, 5,331 tons; nickel, 6,998 tons; iron ore, \$208,154 tons; arsenic, 257 tons; calcium carbide, 2,507 tons; portland cement, 695,260 barrels (worth \$1,182,799); corundum, 1,119 tons; graphite, 4,400 tons; gypsum, 4,520 tons; peat fuel, 1,100 tons; petroleum, 16,640,338 gallons; salt, 58,274 tons.

# HOUSE DECORATING.

DESPITE all that has been said and written against graining, it will always find a place amongst decorative work, and when properly done it will justify its usage. If it be true, as Keats says, that "a thing of beauty is a joy forever," good graining, even from a decorative standpoint, will plead its own cause; and if there be added to its decorative possibilities the fruits of years of intelligent study of the grains of wood coupled with the natural talent for this particular form of decorative work, it becomes not a mere mechanical process, but develops into an art.

It is said that all art is in a sense imitative, and it requires an extremely fine perception to discover the dividing line separating the talent required to execute a finely grained panel from that required to paint a picture.

The renowned artist, Walter Crane, of London, in an address recently delivered before the Master House Painters and Decorators' Association of England and Wales, condemned the use of graining. He says nothing could be more delightful, or a more durable lining for walls of a hall or living room than oak paneling, but nothing to his mind could be more sordid or unpleasant than the woodwork of a room grained to imitate oak. He advocates the use of white paint for interiors. If the effect of an oak room can be had by graining it, we fail to see why it should not be considered artistic, even if an imitation. Artists in their pictures frequently make very poor imitations of wooden furniture if any attempt is made to represent the grain of the wood.—Western Painter.

The estate of H. H. Hayward, general merchant, Fort Qu'Appelle, have advertised for creditors to file all claims on or before September 20, 1904.

# ENQUIRY FOR LIGHTNING RODS.

Editor of Hardware and Metal—Can you give us any information as to where we can get lightning rods and supplies?

W. T. A. FISHLEIGH.

Wingham, Ont.

Lightning rods and all necessary supplies can be obtained from the B. Greening Wire Co., Limited, Hamilton, Ont.—Editor.

N. A. Rudy, general merchant, Han-ley, has admitted N. A. W. Otteson to partnership.



Order a stock of

# "Windmill Best" Galvanized Sheets

Cut Prices Made by Quality Right

John Summers & Sons, Ltd.

STALYBRIDGE, ENG.

Weekly output, 2,000 tons of sheets.  
Canadian Agent,

F. HANKIN, - Montreal

# MODERN MAGIC!



No more matches required to light the gas.  
The "IGNITO" Mantle Lights when the gas is turned on.  
Write for booklet and samples.

The International Gas Appliance Co., Limited  
164 BAY STREET, TORONTO, Canada



Have you  
tried it?  
Tried what?  
**SELLING  
MANTELS.**



This is in your line of business, and it will  
pay you.

**The Batty Stove & Hardware Co**  
78 YORK ST., TORONTO.

## WE WANT WORK

Old Stove Parts Re-nickelled  
Like New.

Put your Stove parts in a box and send  
to us. We do the rest.  
Good as the best. Cheap as the cheapest.

Long Distance Phone, Main 2993.

**FAIRGRIEVE MFG. CO.,**  
TORONTO.

**A PERMANENT  
and Handsome Roof.**



## Arrow Brand Asphalt Ready Roofing.

Will bring you profitable business and satisfaction. It is the only roofing material that will last all years, no matter what the weather. It is the only roofing material that will not rot or decay for years without further attention.

**A. C. JENKING, Sole Agent,**  
Room 215 Coristine Building, - **MONTREAL**  
Sole agents being appointed in each district. Write for details.

When in want of

**Hayfork Pulleys, Mrs. Potts Irons,**  
**Barn Door Hangers, Diamond Dampers,**  
**Jack Screws, Etc.**

Order from

**The H. R. Ives Co., Ltd., - Montreal**

**Montreal Steel Works, Limited**

AGENTS FOR

**THOS. FIRTH & SONS., LTD.**  
**SHEFFIELD, ENG.**

Tool Steel    Axe Steel    Double Shear Steel    Blister Steel  
Firth's Speedicut High Speed Steel    Pivot Valve Steel    Files, Etc.

**Canal Bank, Point St. Charles, - MONTREAL**

# Seasonable Goods

## Colonial Enamelled Preserving Kettles

All Sizes in Stock.    From 2 to 30 quarts.

## Fruit Funnels and Ladles.

In Tin and Enamel Ware.

**Henis Fruit Presses**  
**and Wire Fruit Strainers.**

Prompt Shipment Guaranteed.

**The THOS. DAVIDSON MFG. CO. Limited. ... MONTREAL.**

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27 1904

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27 1904





# HEATING AND PLUMBING

## THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

### OFFICERS.

President—Robt. Ross, Toronto.  
Vice-President—A. J. Hammond, Winnipeg.  
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President—Robert Ross.  
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Secretary-Treasurer—W. H. Meredith.

### HAMILTON.

President—S. Mellon.  
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President—Gil. Julien.  
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### LONDON.

President—B. Noble.  
Vice-President—Wm. Smith.  
Secretary-Treasurer—E. H. Russell.

## THE PLUMBING SUPPLIES MARKET.

### Quebec.

Office of HARDWARE AND METAL,  
232 McGill Street.

Montreal, Aug. 17, 1904.

tention, but other lines are not far behind. Lead pipe, soil pipe and fittings and iron pipe, all continue active. There is no reported change in price.

**Lead Pipe**—Prices continue firm at former quotations, the demand being fairly brisk. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f. o. b. Montreal, Toronto, St. John, N. B., and Halifax; f. o. b. London, 15c per 100 lbs. extra; f. o. b. Hamilton, 10c per 100 lbs. extra.

**Soil Pipe and Fittings**—The demand for soil pipe and fittings continues good, while prices remain unchanged. We quote: Light soil pipe, 3 to 6 inches, 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

**Iron Pipe and Fittings**—As noted last week, the market is stronger and the demand especially good. Prices are quoted on application, as the real conditions cannot be arrived at. Subject to concessions, we quote nominal prices as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4 and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

### Ontario.

Office of HARDWARE AND METAL,  
10 Front Street E.  
Toronto, August 19, 1905.

THE local market still remains a little quiet, although things are picking up in Western Ontario. This quiet feeling has been in evidence for four weeks. It is thought that the holiday season has been the cause, and it is hoped that when the plumbers who are away holidaying return there will be an active market. Quotations are unchanged.

**Lead Pipe**—Business is fair, although there has been a noticeable quietness during the last few weeks. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

**Soil Pipe and Fittings**—Trade is very fair. Prices are easy, but there is no change in quotations since last week. We quote: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

**Iron Pipe and Fittings**—Prices are not likely to reach a lower ebb than that here quoted. A very good business is being done at the low prices. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1-2 to 70 per cent.

**Copper Range Boilers**—A fair, steady trade is being done since the new prices were issued. Discounts at 15 per cent. continue.

**Iron Pipe**—Prices are unchanged. Competition is not now quite so keen. Prices here quoted are thought to be bottom prices. Our quotations are f. o. b. Toronto as follows: Black pipe, 1-8 in., \$1.85 to \$1.95; 1-4 in., \$1.90 to \$2.05; 3-8 in., \$2 to \$2.25; 1-2 in., \$2.25 to \$2.35; 3-4 in., \$2.85 to \$3; 1 in., \$4 to \$4.25; 1 1-4 in., \$5.75 to \$6; 1 1-2 in., \$7 to \$7.25; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.65 to \$2.80; 3-8 in., \$2.80 to \$3; 1-2 in., \$3.15 to \$3.25; 3-4 in., \$4 to \$4.10; 1 in., \$5.90 to \$6; 1 1-4 in., \$8.25 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

**Enamelled Ware**—Prices are firm, and an active trade is being done. We quote: "Standard," 5 1-2 feet, 2 1-2 in. rolled rim, first quality, at \$21.60; second quality \$16.35.

ORDERS for plumbing supplies have been received in large numbers during the past week. Business is a little less brisk than formerly, but on the whole is fairly satisfactory. Heating goods are receiving particular at-





## Two Winners

These two lines are for your varnish trade, made for varnish business; to please the public and the user generally.

**The Universal** is a regular "king" among varnishes with an interesting rebate voucher attached to each can, paid by us on presentation. Ask for our booklet.

**The Kaurine** is consort to the Universal. It's a happy winner. Specially recommended for interior work.

All in handsome cans, fully guaranteed and yielding a good profit.

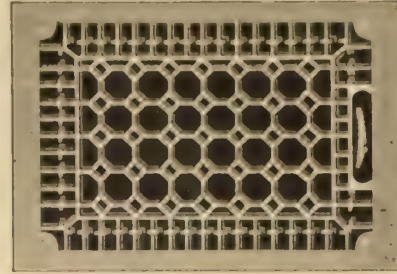
**A. RAMSAY & SON  
MONTREAL**

EST'D  
1842

**VARNISH  
MAKERS**



## "REGISTERED OF QUALITY"



MOORISH FLOOR REGISTER.

## THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.

## Imperial Oxford Advertising

in the daily papers throughout Canada is causing brisk business for the merchants who handle the

### IMPERIAL OXFORD RANGE.

It's good advertising for a good range. That makes good business.

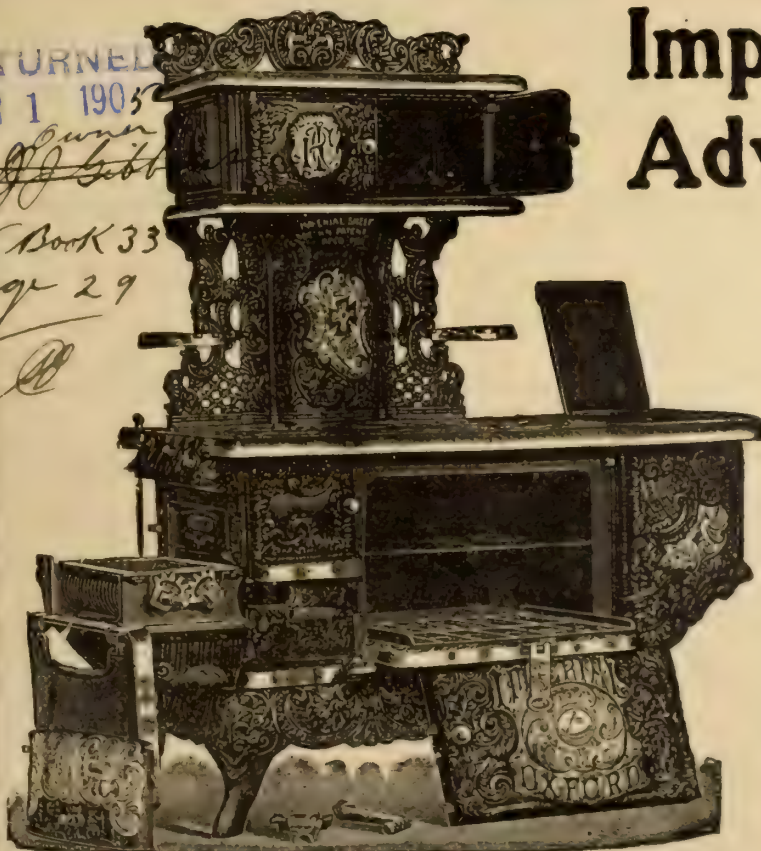
More people know the good points of the IMPERIAL OXFORD to-day than ever before. We never stop impressing them with its pre-eminence. It is the easiest range on the market to sell.

**The Gurney Foundry Co., Limited,**  
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

**THE GURNEY-MASSEY CO., LIMITED,**  
MONTREAL, QUE.

**THE GURNEY STANDARD METAL CO., LIMITED**  
CALGARY, ALTA.



RETURNED

APR 1 1905

To J. J. Scott

Club Book 33

Page 29



**Builders' Laborers' Strike.**

**B**UILDING operations in Toronto have been suspended indefinitely by the strike of the builders' laborers. In the burned district many new warehouses and other buildings are half built, while some are just being commenced. Throughout the city building operations are well advanced for the most part, so that the delay will be felt principally in the burned district, since in very few cases can any work be carried on. The first three or four days of the strike, carpenters were working in some of the most advanced buildings laying flooring.

At a meeting of the Builders' Exchange on August 16, i. was decided not to concede in the least to the Laborers' Union in the demand for 28 cents per hour. The contractors say that if the laborers do not return to work their places will be filled. They claim that there are plenty of men to be had, but not so good as the strikers.

It is not thought that the bricklayers, stonemasons and stonecutters are in sympathy with the strikers, but it has been decided that because of the close connection existing among the allied unions if they are asked to receive material from non-union men they will strike.

The situation is then: The laborers are on strike; the contractors will not give in, claiming that they can obtain non-union labor; bricklayers, stonemasons and stonecutters are said not to be in sympathy, but will, if non-union labor is employed, because of the understanding among the unions, be called upon to strike.

Meanwhile time is passing and nothing is being done.

**The Shower Bath.**

**T**HE high-class bathtub never before enjoyed the deserved popularity it now commands. In view of the fact that the modern bathtub is now at the height of its general appreciation, it may seem premature to suggest that the not far distant future will see it replaced by the shower bath. Yet this opinion is advanced by an observer in close touch with this branch of trade and the trend of the times in the plumbing field. It is a fact that the catalogues of plumbing fixtures issued within the past year or two include shower bath equipment, either for use in connection with bathtubs or independent of them, and, whereas a few years ago, the manufacturers of these fixtures could be counted upon the fingers of one hand, quite a large number of the brass goods

makers have now taken up the manufacture of some form of shower bath fixture. Some special equipment or modification of existing apparatus is all that is necessary to avoid wetting the hair of women and enabling them to enjoy the refreshing effect of the shower bath at any agreeable temperature. Many persons become familiar with the shower bath at clubs or bathing establishments, and prefer them to a plunge. That the shower is increasing in favor is sufficiently clear for the enterprising plumber to acquire a mastery of every detail of its installation under all possible conditions. It is too soon, however, for the manufacturers of the popular bathtubs to look for any reduction in the demand for these popular adjuncts to the family health and comfort, and the plumber can look forward to many years of profitable employment in their installation, even though he may find additional profit in setting up shower bath fixtures.—Metal Worker.

**Building Permits.****TORONTO.**

C. B. Williams, dwelling on Wellesley street, \$3,000.

Wm. Jay, dwelling on Wells street, \$2,800.

W. W. Hiltz, pair dwellings on Bain avenue, \$4,000.

Wm. Pinkerton, three dwellings on Hollis avenue, \$3,300.

Trustees of St. John's Hospital, addition to dwelling on Major street, \$2,900.

James Wythe, dwelling on Givens street, \$4,000.

F. L. Beecroft, dwelling on Concord avenue, \$3,000.

James W. B. Walsh, dwelling on Lowther and Huron street, \$12,000.

A. B. Ormsby, driving shed on Queen and George streets, \$1,500.

A. A. Barthelines, dwelling on Palmerston avenue, \$9,000.

E. Willfong, dwellings on Bellwoods avenue, \$15,000.

Dr. H. McFaul, residence on Dovercourt road, \$5,000.

E. J. Dignum, warehouse on Bay and Wellington streets, \$17,000.

Wickett & Craig, dwellings on Cypress street, \$2,000.

W. J. Flaury, residence on Bedford road, \$8,000.

John Townsend, livery stable on Yorkville avenue, \$9,000.

Merchants' Union Co., factory on Wellington street, \$60,000.

H. W. Love, dwellings on First avenue, \$3,400.

J. Squires, stores on Bloor and Rissett streets, \$4,000.

Mr. Huff, warehouse on Lombard street, \$4,000.

Mr. Hearne, dwelling on Dufferin street, \$2,300.

W. H. Hall, residence on Beatty avenue, \$3,200.

W. J. Gage, alterations to dwelling on Bloor and Walmer road, \$2,500.

C. B. Gzowski, residence on Glen road, \$2,000.

A. G. Biette, dwelling on Shaw street, \$2,400.

C. H. Grobb, dwelling on Spenceer avenue, \$3,500.

J. Percy, dwelling on Howland avenue, \$3,650.

S. B. Coon, dwelling on Macpherson avenue, \$6,000.

John Hambleton, dwelling on Concord avenue, \$5,000.

N. H. Brown, dwelling on Indian Grove, \$3,500.

J. H. Young, dwelling on Grenville and St. Vincent streets, \$2,500.

Messrs. Holt & Devitt, dwelling on Crawford street, \$4,500.

**MONTREAL.**

J. Forbes, Garnier street, one dwelling, \$2,500.

P. E. Cleraux, Lagauchetiere street, one dwelling, \$2,500.

Ed. Toussaint, Chambard street, one dwelling, \$1,000.

Thos. Robertson Co., Limited, cor Hugues lane and Dalhousie street, one warehouse, \$11,000.

H. Poitras, St. Denis street, one dwelling, \$6,000.

H. M. Marler, Peel street, one dwelling, \$7,000.

A. Vezina, Metana street, one dwelling, \$2,900.

T. Chabot, Aylwin street, two dwellings, one \$2,200 and one \$2,000.

L. Auchul, 210 Aylwin street, one dwelling, \$2,500.

Wm. Darlington, 62 Knox street, one dwelling, \$2,200.

F. Piroteau, Christoph Colomb street, one dwelling, \$2,700.

Henry Cote, Lagauchetiere street, one store, \$2,000.

Gunn, Langlois & Co., St. Vincent street, one warehouse, \$20,000.

Montreal Stock Yard, St. Charles street, new buildings, \$35,000.

Geo. Phipps, Aylwin street, one dwelling, \$3,000.

Leblux Carriage Co., Limited, alterations on factory, \$10,000.

J. Vineberg, alterations on house, \$1,990.



**P. H. BENDS BUT DOES NOT BREAK**

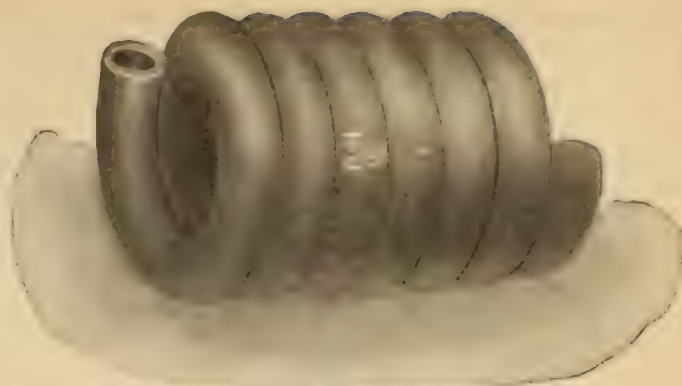


Trade Mark.

Crown  
Pipe

This can't be said of the  
common pipe.

Insist upon Crown Brand Pipe.  
Quality will be remembered long  
after price has been forgotten.



**PAGE-HERSEY IRON AND TUBE CO., GUELPH**  
LIMITED, ONTARIO

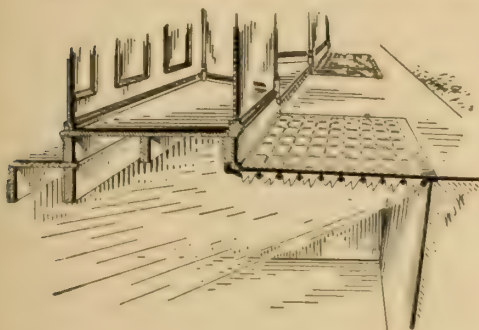
**NOT IN THE COMBINE**

Ask for Prices of  
**Shovels, Spades, Scoops, Etc.**  
WE HAVE A LARGE STOCK.

**CANADA HARDWARE CO., Limited, Montreal**

## STORE ALTERATIONS

Now is the time—do not leave until winter months. Send for information and



**BEST METHOD  
of LIGHTING  
STORES,  
BASEMENTS,  
CELLARS.**

**LUXFER PRISM CO., Limited,**  
100 King St. West,  
TORONTO.



## WRITE FOR OUR SPECIAL PROPOSITION

on Bathroom Appliances and Lavatory Fixtures. As a side line to your general plumbing business they are without an equal, and the big margin of profit allowed the dealer makes them a most profitable line to carry. The goods and the prices are both attractive.

**THE JAMES MORRISON BRASS MFG. CO.,**  
TORONTO, ONTARIO LIMITED



# INDUSTRIAL GOSSIP

**HARDWARE AND METAL** would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

The Consumers' Gas Co., Toronto, have signed a contract with G. and W. Walker, Limited, of the Midland Iron Works, Donnington, Salop, England, for a steel tank 184 feet in diameter and 33 feet deep. This tank will be fitted with a telescope gas holder, with four lifts, and will be the largest in Canada, having a capacity of 3,000,000 cubic feet. The total amount of the whole contract for tank, gas-holder, and guide framing will approach closely upon the sum of \$150,000.

• • •

The Canadian Carriage Hardware Association met in Guelph recently. President D. Cowan, of London, was in the chair, and representatives were present from all parts of the Dominion. The principal business was the readjustment of prices on certain articles. The association has felt for some time past that several of the sale prices have been incorrect, and that they should be more systematic. Accordingly a number were lowered and certain ones increased. The change will not affect the people directly, as the association caters only to the wholesale trade.

• • •

Chas. M. Schwab, who is now going to devote his attention to the development of the reorganized Bethlehem Steel Co., known as the Bethlehem Co., with \$15,000,000 of preferred stock and \$15,000,000 of common, takes a very favorable view of the future of the steel industry in the States. Next Spring he looks for the country to begin a period of prosperity never before equalled. In 1879 the steel tonnage of the United States was 1,000,000 tons. Ten years later it has grown to 7,000,000 tons. In 1899 the tonnage was from 12,500,000 to 14,000,000 tons. It is now between 15,000,000 and 16,000,000, and within 10 years he expects to see the tonnage reach the 20,000,000 ton mark.

## NOTES.

Slight damage was done the works of the Gutta Percha and Rubber Co., Toronto, on Aug. 11, by fire.

The Leamington & Harrow Oil Co., Leamington, Ont., are very sanguine over the showing in their first oil well.

The Toledo Shovel Works, Toledo, U. S. A., are making arrangements to establish a branch factory in Hamilton, Ont.

The loss on the Albion Iron works destroyed in the recent fire at Victoria, B. C., is pretty well covered by insurance.

The Moncton Woodworking Co., Limited, Moncton, N. B., are applying for incorporation at Fredericton; the capital is to be \$8,000.

The Comstock's saw and planing mill at Standstead, near Sherbrooke, Que., has been destroyed by fire. The loss is estimated at over \$5,000.

A dispatch from Sault Ste. Marie says that September 1 is now the date set for the opening of the steel plant. It was reported some weeks ago that September 15 was the date.

A large section of the Kinleith Paper Co.'s mill at St. Catharines was recently destroyed by a boiler explosion. Operations have been suspended in sections of the mill in consequence.

The Victoria Ascetylene Mfg. Co., of Canada, Limited, are applying at Fredericton, N. B., for incorporation. The capital stock is to be \$25,000, and the head office to be Hampton.

The Dominion Iron & Steel Co. will shortly commence the construction of a new iron yard between the open hearth and blast furnaces, which will facilitate the movement of material intended for shipment. This work will include the construction of four tracks, two raised and two level.

At the annual meeting of the Hamilton Steel and Iron Co., the old board of officers were elected, as follows: C. S. Wilcox, president; C. E. Doolittle and A. E. Carpenter, vice-presidents; John Milne, Wm. Southam, Sr., Geo. S. Lynch-Staunton, K. C., and P. Hiscott of Cleveland, directors.

The Northern Land & Lumber Co., Fort William, are extending their plant. A new planing mill has been constructed, and a new boiler building is under construction. A new boiler has been installed and the machinery from the old building is being moved into the new one.

Another coal company is going to begin mining coal near Frank, Alberta. A capital of \$50,000 has been subscribed and about 200 acres of land purchased. The promoter of the company is Rufus Pope, M. P. for Compton. The mining

operations are under the directions of C. P. Hill.

## COMPANIES INCORPORATED.

Rhys D. Fairbairn, Limited, Toronto; capital, \$50,000; purpose, to manufacture and sell dry goods. The directors are: R. D. Fairbairn, I. A. Fairbairn, and R. B. Henderson, all of Toronto.

Imperial Leather Co., Limited, Toronto; capital, \$40,000; purpose, to operate a tannery and to buy and sell hides. The directors are: C. A. Crawford, T. L. Bray and H. Hunter, all of Toronto.

The Victor Varnish Co., Limited, Toronto; capital, \$40,000; purpose, to manufacture and sell varnishes, japans, colors and paints. The directors of the company are: A. C. McMaster, G. R. Geary, W. P. Brodie, all of Toronto.

The Stratford Chair Co., Limited, Stratford; capital, \$60,000; purpose, to manufacture furniture. The directors are: W. H. Crowe, A. J. McPherson, F. A. Nichols, A. M. Paton and J. A. McFadgen, all of Stratford.

Dominion Boiler Screen Co., Limited, Toronto; capital, \$150,000; purpose, to manufacture and deal in the Mansell Patent Roller Wire Screen. The directors are: F. A. Mansell, E. Sheetz, J. M. Lynde, C. T. Rodman and W. J. Coutts, all of Toronto.

The Goderich Cement Brick Co., Limited, Goderich; capital, \$40,000; purpose, to manufacture and deal in cement, cement bricks, blocks, and tile. The directors are: G. Acheson, J. Clark, J. A. McIntosh, Wm. Proudfoot and J. P. Brown, all of Goderich.

The Stewart, Howe & Meek Co., Limited, Toronto; capital, \$100,000; purpose, to manufacture and sell wearing apparel and personal adornments of all descriptions of all kinds. The directors are: A. J. Stewart, L. F. Howe and C. S. Meek, all of Toronto.

Typograph, Limited, Windsor; capital, \$8,000; purpose, to manufacture and deal in machinery, engines, tools and apparatus for the manufacture of heat, light and power. The directors are: J. B. Allan, Detroit; F. H. Macpherson and S. B. Best, both of Windsor.

The Southern Light & Power Co., Limited, Toronto; capital, \$300,000; to produce and supply steam and electricity and supply natural gas for heat, light or power. The directors are: F. J. A. Davidson, C. A. Stone, and D. A. Dixon, all of Toronto.

The Alpena Oil & Gas Co., Limited, Chatham; capital, \$100,000; purpose, to carry on in all its branches the operations of a mining, milling, reduction and development company. The directors are: S. T. Bell and S. Eagle, both of



CHARLES BAYNES, England.  
MAKER OF THE KNUZDEN BROOK, BLACKBURN,  
**"CLICK-CLACK"**  
HACK SAW BLADES.  
In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited  
HANOVER, ONTARIO.

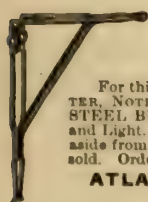
Manufacturers of the Celebrated **"Saugeen Brand"**  
OF PORTLAND CEMENT.  
Prices on application.

## "THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—

**CHARLES D. PHILLIPS,**

Cables— "Machinery," Newport. Emlyn Engineering Works NEWPORT, MON., ENGLAND



## Will Hold Up a Shelf !

That's what a shelf bracket is for.

For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

**ATLAS MFG. CO.,**

New Haven, Conn., U.S.A.

## Books for Hardware Men

### The American Hardware Store.

By R. R. Williams: 576 pages: 6 $\frac{3}{4}$  x 10 inches: 660 illustrations; bound in cloth .....\$3.00

### Hardware Store Business Methods.

A series of articles dealing with business methods in the hardware store, by different authors: 227 pages: 5 $\frac{1}{2}$  x 8 inches: illustrated; cloth binding.....\$1.00

Enquiries for above books should be sent to

Book Department, **HARDWARE AND METAL**  
TORONTO.



It is a fact that one man with our **PATENT PIPE DIE** can easily do the work of two men with any other. Send us your address and we will explain HOW and WHY.

**A. B. JARDINE & CO.**

Mfrs. TAPS and DIES.

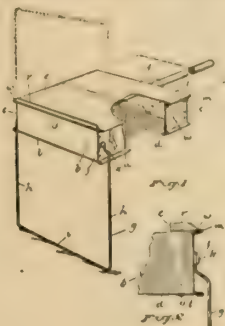
HESPELER, ONT.

# PIG IRON

FOR  
IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.



## Sell it for a Quarter,

make a first-class profit, and please your customer.

## Our Metal Ash Sifter

is a marvel. Can't come apart.

Send for Circular

**C. M. CUTTS & CO, Toronto Junction, Ont.**

Pat. in Canada, May 17, '04. U.S. Pat. allowed.



## Pedlar's "Perfect" Metal Lath

On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.

24 gauge 13c. per square yard.

F.O.B., Oshawa.

(Oshawa rate same as from Toronto.)

Discount to Dealers only.

Our lath mill is now in full operation and as we have a capacity of ten tons or 12,000 yards per 10 hours, all orders can be executed promptly.

**Pedlar People, Oshawa, Can.,**  
or 767 Craig St., Montreal,  
Que.



# ART GLASS

UNEXCELLED

MEMORIAL WINDOWS.

H. E. St. George, London, Ont.

Orlan Clyde Cullen, C.E.L.L.M.

Counsellor at Law U.S. Supreme Court.  
Registered Attorney U.S. Patent Office,

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SCOTT, GREENWOOD &amp; CO.

19 LUDGATE HILL - LONDON, ENG.

## "COMET"

Brand

Galvanized Sheets

are made of British Steel, manufactured  
at the works of

W. Gilbertson &amp; Co., Limited

Pontardawe, Wales.

No better quality made. Price low.

AGENT

Alexander Gibb, - Montreal

Alpena, Mich.; T. Robinson, Kent Co.,  
Ont., J. Rutherford and R. L. Gosnell,  
both of Blenheim, Ont.The International Varnish Co., Limited,  
Toronto; capital, \$100,000; purpose,  
to manufacture and sell varnishes,  
paints, lacquers, stains and japans. The  
directors are: H. Rosenberg, Max  
Wolf, Wm. Rosenberg and F. W. Herz,  
all of New York; and O. Rosenberg,  
Chicago.

### LICENSES GRANTED.

The 2 Macs, Limited, incorporated under  
the laws of the Dominion Government  
to carry out in Ontario all matters  
comprised within their powers.The Empire Tobacco Co., Limited,  
incorporated under the laws of the  
Dominion Government, to carry out in  
Ontario all matters comprised within  
their powers.

### PERSONAL MENTION.

Mr. W. H. Nolan, of the Canada Machinery  
Agency, Montreal, left on Tuesday  
for a business trip to New York and  
Boston.Mr. S. R. Brewer, the genial secretary-treasurer  
of the Thos. Robertson Co., Limited,  
Montreal, left on Wednesday for a well  
earned holiday of a few weeks at Point  
au Chene, P.Q.Mr. J. M. Clark, K.C., author of a  
standard work on the law of mines in  
Canada, spent a few days at the Windsor  
Hotel, Montreal, last week. Mr. Clark  
was en route to join his family, who  
are Summering in the Maritime  
Provinces.A sad accident occurred recently in  
Arizona, in which Mr. J. H. Goodman,  
a native of Montreal, met a tragic death.  
He was descending a shaft of over 500  
feet depth when the bucket was upset  
and he was dashed to the bottom. The  
deceased was a brother of Mr. J. E.  
Goodman of the firm of Amoit, Lecours  
& Lariviere, wholesale hardware dealers,  
Montreal.Mr. H. G. Hollis, manager of the  
New York branch of the Lufkin Rule Co.,  
Saginaw, Mich., called at the Montreal  
office of Hardware and Metal last week.  
Mr. Hollis was visiting the Montreal  
trade on his return journey from Ottawa  
where he has been busily engaged for  
some time explaining to the department  
interested the effect of their classification  
of rules and tapes, etc. Mr. Hollis  
succeeded in having some changes made  
which should facilitate the business of  
his firm.

# Technical

## Works

Books Written for the  
Metal Merchant or  
the Metal Worker.

### A Manual of Mechanical Drawing.

By Philip D. Johnston; 65 full-page  
plates and 2 folding plates, with full text  
and 134 illustrations; cloth.....\$2.00

### Domestic Electrical Work.

By W. A. Wittbecker. How to wire build-  
ings for bells, alarms, annunciators, and  
gas lighting from batteries. 55 pages,  
illustrated; paper, 25c.; cloth.....50c.

### Ladd's Discount Book.

By W. J. Ladd, showing net of any sum  
at all discounts; cloth, \$3.00; double  
indexed.....\$4.00

### Blue Print Making.

A pamphlet. Directions for Constructing  
and Printing Frame, Preparing the Paper  
and Making Prints of Various Kinds.  
25 pages.....25c.

### Architects' Handbook on Cements.

By Addison H. Clarke. Specifications for  
mixing and using cements. 96 pages....\$1.00

### Metallurgy of Cast Iron.

By Thos. D. West. Showing processes  
involved in its treatment, chemically and  
physically, from the blast furnace,  
through the foundry, to the testing  
machine. 627 pages, 153 illustrations....\$3.00

### Galvanizing and Tinning.

By W. T. Flanders. Coating with tin and  
zinc; also tinning gray iron castings....\$2.00

### Practical Plating and Polishing.

Best and Most Approved Methods of  
Preparing and Cleaning all Metals for  
Electro-Plating and Polishing. 114 pages,  
illustrated.....80c.

### New Metal Worker Pattern Book.

By Geo. W. Kittredge. Pattern cutting as  
applied to all branches of sheet metal  
work, 430 pages, 744 illustrations.....\$5.00

### Tinners' Helper and Pattern Book.

By H. K. Vosburgh. Rules, diagrams,  
tables, 123 pages, 53 figures.....\$1.00

### Roofing, Cornice and Skylight Manual.

Laying flat and standing seam roofing,  
cornice shop practice and skylight con-  
struction, 175 pages, 170 illustrations and  
13 plates.....\$1.50

### Furnace Heating.

By Wm. G. Snow. Comprehensive treatise  
on warming buildings with hot air, with  
appendix on furnace fittings, 170 pages,  
90 illustrations, cloth.....\$1.50

### Plumbing Problems.

House drainage and plumbing, 309 pages,  
146 illustrations.....\$2.00

### Practical Hints on Joint Wiping.

For beginners in plumbing, 66 pages.....25c.

### Kitchen Boiler Connections.

A selection of practical letters and arti-  
cles relating to water backs and range  
boilers. Fifth edition, enlarged.....\$1.00

### Steam and Hot Water Fitters' Text Book.

A book prepared for the Steam and Hot  
Water Heating Course at the New York  
Trade School, with supplementary chap-  
ters on house heating, specifications and  
surface estimating, by Thos. E. McNeill.  
140 pages; 5 x 7 in.; numerous illustra-  
tions; cloth binding.....\$1.00

### Easy Lessons in Roof Measurements.

Twelve short lessons on figuring from  
architects' or scale drawings the amount  
of material required to cover a given sur-  
face in flat, hipped or irregular shaped  
roofs, by W. Neubecker. 31 pages; 5½ x  
8 in.; 12 illustrations; paper cover.....25c.Enquiries for above books should be  
sent to

BOOK DEPARTMENT

HARDWARE AND METAL,  
Toronto

## METAL SKYLIGHTS and WINDOW FRAMES

Glazed with FIREPROOF GLASS.

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A. B. ORMSBY LIMITED,  
MANUFACTURERS AND CONTRACTORS,  
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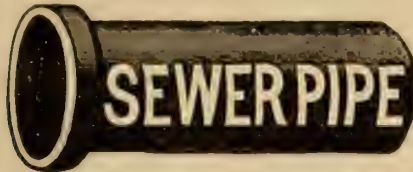


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Manufacturers' Agent and Metal Broker,  
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Representing British and American Manufacturers. Correspondence invited from firms wishing to be represented in Canada.

**... FULL STOCK ...**

**Salt Glazed Vitrified**

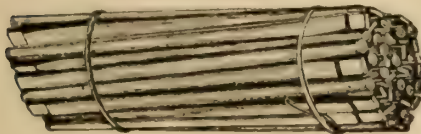
Double Strength Culvert Pipe  
a Specialty.

**THE CANADIAN SEWER PIPE CO.**

HAMILTON, ONT. TORONTO, ONT.  
ST. JOHNS, QUE.

J. S. LOUGHEAD.

F. J. LOUGHEAD, Manager



The Sarnia, Ontario, Hub, Spoke  
and Bent Goods Factory.

The proprietors would respectfully call attention of those interested to the fact that through the enlargement of their plant they are prepared to fill any orders entrusted to them at short notice, as their stock of material on hand and constantly arriving is the largest they have had for years. Terms reasonable and quality guaranteed.

A trial order is respectfully requested. Special attention is called to Oak Wheel Rims and Spokes, also Sleigh Runners in Hickory and Oak, from 1 inch to 4 inch shoe.

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J. S. LOUGHEAD & SON, Sarnia, Ont.

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**STOVE PIPE**



Manufactured only by

**E. T. Wright & Co., Hamilton, Canada**

**Iron Will Melt**

where our Asbestos Furnace Cement will stand.

**Asbestos Furnace Cement**

is fire and acid proof, and burns hard as the iron itself. No heat can destroy it.

Sold on a "money back" basis.

Send for circular and price list.

G. F. STERNE & SON, Makers, BRANTFORD, Ont.

**DIAMOND EXTENSION FRONT GRATE.**

Ends Slide in Dovetails similar to  
Diamond Stove Back.

**Diamond  
Adjustable Cook  
Stove Damper**

Patented March 14th, 1893.



Patented December 22nd, 1890.

**EXTENDED.**

4 x 11 to 6 x 21.

For Sale by Jobbers of Hardware.

Manufactured by **THE ADAMS COMPANY, Dubuque, Iowa, U.S.A.**  
**TAYLOR-FORBES CO., Limited, Guelph, Ontario**

**WHY DON'T YOU BUY ...**

**Rex  
Flintkote  
Roofing**



NO Roofing has ever given satisfaction or service like **REX Flintkote Roofing**. It is the result of years of labor, and is made of the best matted wool fibre treated by our own compounds. It is waterproof, fire-resisting, and is not affected by vapors of acids or alkalis. It costs less than shingles, and can be laid by anyone. Our book tells more about it, and will be sent free, with samples.

J. A. & W. BIRD & CO.,  
49 India Street, Boston, Mass.

**Rex Flintkote Roofing** is used on thousands of buildings in the U. S. and Canada, and is fast becoming the universal roofing.

**"LOOK FOR THE BOY" ON EVERY ROLL**

**To Manufacturers'  
Agents:**

HARDWARE AND METAL has enquiries from time to time from manufacturers and others wanting representatives in the leading business centres here and abroad.

Firms or individuals open for agencies in Canada or abroad may have their names and addresses placed on a special list kept for the information of enquirers in our various offices throughout Canada and in Great Britain without charge.

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Business Manager

**HARDWARE AND METAL**


Montreal and Toronto



# ALEX. McARTHUR & CO., LIMITED

82 MCGILL STREET, - MONTREAL

Hardware Dealers should know that the **QUALITY** of our

**Ready Roofing, Sheathing and Black  Diamond Tarred Felts, Building Papers, Fibre and Manilla Wrappings, etc., is of THE BEST.**

Made at our own Mills and Factory.

Send for Quotations.

**FELT FACTORY**

Harbour and Logan Sts., MONTREAL

**PAPER MILLS**

JOLLIETTE, QUE.

## CURRENT MARKET QUOTATIONS.

Aug. 19, 1904.

These prices are for such quantities and quantities as are usually ordered by retail dealers on the usual terms of credit, the lowest figures being for larger quantities and prompt pay. Large cash buyers can frequently make purchases at better prices. The Editor is anxious to be informed at once of any apparent errors in this list, as the desire is to make it perfectly accurate.

### METALS.

#### TIN.

Lamb and Flag and Straits—  
56 and 28-lb. ingots, 100 lb. \$30 00 \$31 00

#### TINPLATES.

Charcoal Plates—Bright. Per box.

M.L.S., equal to Bradley—  
I C, usual sizes. \$6 50  
I X " " 8 00  
I X X " " 9 50

Famous, equal to Bradley—  
I C " " 6 75  
I X " " 8 25  
I X X " " 9 75

Raven and Vulture Grades—  
I C, usual sizes. 4 25  
I X " " 5 00  
I X X " " 5 75  
I X X X " " 6 50

"Dominion Crown Best"—Double  
Coated, Tissue. Per box.

I C " " 5 50  
I X " " 6 50  
I X X " " 7 50  
I X X X " " 8 50

Allaway's Best—Standard Quality.  
I C " " 4 50  
I X " " 5 50  
I X X " " 6 50

Coke Plates—Bright.

Beasmer Steel—  
I C, usual size, 14x20. 3 35  
I C, special sizes, base. 3 60  
20x28. 7 10

Charcoal Plates—Terne

Dean or J. G. Grade—  
I C, 20x28, 112 sheets. 7 50  
I X, Terne Tin. 10 50

Charcoal Tin Boiler Plates.

Cookley Grade—  
X X, 14x56, 50 sheet box. }  
" 14x60, " " } 7 00  
" 14x65, " " }

Tinned Sheets.

72x30 up to 24 gauge. 7 25  
" 26 " " 7 75

IRON AND STEEL.

Common bar, per 100 lb. 1 80

Refined " " 2 20

Horseshoe Iron " " 2 25

Hoop steel, 1 1/2 to 3-in. base. 2 75

Sleigh shoe steel. 2 10

Tire steel. 2 30

T. Firth & Co.'s tool steel, per lb. 0 12 1/2

B. K. Morton & Co.  
" Alpha " tool steel. 0 70  
" M " Self Hardening. 0 70  
" I " Standard. 0 14  
" " high speed steel. 0 60  
" " standard tool steel. 0 14  
" " crucible steel. 0 14  
" " Chas. Leonard's tool. 0 08

Crucible Steel Co.  
" Black Diamond. 0 10  
" Silver steel. 0 13  
" Special. 0 17  
" Rex high speed steel. 0 65  
" Self Hardening. 0 45  
" Superior. 0 12  
" Extra And. 0 15  
" Self Hardening. 0 45  
" Rex high speed. 0 65  
" Jones & Colver's tool steel. 0 10  
" " Air Hardening. 0 70  
" Drill steel, per lb. 0 08

### BABBIT METAL.

"Tandem," A. per lb. 0 27

" " B. " 0 20

" " C. " 0 11 1/2

Frictionless Metal. " 0 23

Syracuse Smelting Works:

Aluminum, genuine. 0 45

Government, " 0 44

Tough, " 0 40

Hard, " 0 40

Dynamo. 0 30

Special. 0 25

Harmony. 0 22

Car Box. 0 20

Extra. 0 15

The Canada Metal Co.:

Imperial, genuine. 0 40

Metallic. 0 30

Hercules. 0 20

Star. 0 15

No. 1. 0 12

No. 2. 0 10

No. 3. 0 06

No. 4. 0 05

Geo. Langwell & Son.

No. 1. 0 08

No. 2. 0 07

No. 3. 0 05 1/2

Extra. 0 09 1/2

BLACK SHEETS.

10 and 16 gauge. Montreal. Toronto.

18 gauge. 2 25 2 50

20 " " 2 30 2 50

22 to 24 gauge. 2 30 2 50

26 " " 2 40 2 80

28 " " 2 40 2 90

COPPER WIRE.

Discount, 50 per cent.

CANADA PLATES.

Ordinary. 2 60

All bright. 3 50

Galvanized Canada Plates—Ordinary. Dom. Crown.

18x24x52. 4 25 4 35

" 60. 4 50 4 60

20x28x80. 8 50 8 70

" 94. 9 00 9 2

GALVANIZED SHEETS. Queen's

Fleur-de-Lis. Gordon Crown. Comet Bell. Head

16 gauge. 3 65 3 75 3 75 3 75

18 to 24 gauge. 3 75 3 50 3 75 3 75

20 " " 3 75 3 75 3 90 4 00

22 " " 4 00 3 75 3 90 4 00

26 " " 4 25 4 00 4 05 4 25

American brands, \$4.00 for 101 oz.

Less than case lots 10 to 15c. extra.

CHAIN.

Proof, coil, 3-16 in., per 100 lb. 7 00 10 00

" 5-16 " " 5 60

" 3-8 " " 4 45

" 1-2 " " 3 85

" 7-16 " " 3 70

" 1-4 " " 3 55

" 9-16 " " 3 45

" " " " 3 35

" " " " 3 25

Halter, kennel and post chains, 40 to 40 and 5 per cent.

Cow ties. 40 p.c.

Tie out chains. 65 p.c.

Stall fixtures. 35 p.c.

Trace chain. 45 p.c.

Jack chain, iron, single and double, discount 35 p.c.

Jack chain, brass, single and double, discount 40 p.c.

COPPER.

Ingot. Per 100 lb.

Casting, car lots. 13 75

Bars.

Cut lengths, round, 1/2 to 1 in. 21 00 23 00

" round and square, 1 to 2 inches. 21 00 23 00

Sheet.

Plain, 16 oz., 14x48 and 14x60. 20 00

Plain, 14 oz. 21 00

Tinned copper sheet. 24 00

Planished. 32 00

Braziers' (in sheets).

4x6 ft., 25 to 30 lb. each, per lb. 0 22

" 35 to 45 " " 0 21

" 50-lb. and above " " 0 20

BOILER AND T.K. PITTS.

Plain tinned, per lb. 0 28

Spun, per lb. 0 32

BRASS.

Rod and Sheet, 14 to 30 gauge, 15 per cent.

Sheets, hard-rolled, 2x4. 0 23

Tubing, base, per lb. 0 23 1/2

ZINC SPELTER.

Foreign, per 100 lb. 6 00 6 25

Domestic. " " " "

ZINC SHEET.

5-cwt. casks. 6 15 6 50

Part casks. 6 50 7 00

LEAD.

Imported Pig, per 100 lb. 3 20 3 30

Bar, per lb. 0 05

Sheets, 2 1/2 lb. sq. ft., by roll. 0 06 1/2

Sheets, 3 to 6 lb. " " 0 06

NOTE.—Cut sheets 1/2 c. per lb., extra. Pipe, by the roll, usual weights per yard, lists at 7c. per lb. and 35 p.c. f.o.b. Toronto.

NOTE.—Cut lengths; net price, waste pipe 8-ft. lengths, lists at 8c.

ANTIMONY.

Cookson's. " per lb. 7 50 8 00

SHOT.

Common, \$6.50 per 100 lb.; chilled, \$7.00 per 100 lb.; buck, seal and ball, \$7.50. Discount, 17 1/2 p.c. Prices are f.o.b. Toronto, Hamilton, Montreal, St. John and Halifax.

Terms, 3 p.c. cash, freights equalized.

PLUMBING GOODS.

BATH TUBS.

Zinc. 6 00

Copper, discount 20 per cent. off revised list.

BATHS.

Standard Enameled.

5 1/2 ft. 2 1/2 in. rolled rim, 1st quality. 21 60

5 1/2 " " 2nd " " 16 35

CLOSETS.

Fittings. 1 00

Plain Simplex Siphon Jet. 9 00

Emb. 9 50

Fittings. 1 25

Low Down Elgin or Leutonic, plain. 6 00

Low " emb. 6 50

Connection. 1 25

Plain Richelieu. 4 25

Emb. 4 50

Connections. 1 25

Basins, F.O., 14-in. 1 63

Basins, oval, 17 x 14-in. 1 50

Basins, " 19 x 15-in. 2 00

IRON PIPE.

Black pipe—

Per 100 feet.

1/2 inch. 1 85

" 3/4 " 1 95

" 1 " 2 15

" 1 1/2 " 2 35

" 2 " 2 95

" 2 1/2 " 4 25

" 3 " 5 95

" 3 1/2 " 7 15

" 4 " 10 00

" 4 1/2 " 18 00

" 5 " 21 00

" 5 1/2 " 26 75

" 6 " 32 00

" 6 1/2 " 38 00

" 7 " 40 00

" 7 1/2 " 53 00

Galvanized pipe—

1/2 inch. 2 88

" 3/4 " 3 11

" 1 " 3 42

" 1 1/2 " 4 40

" 2 " 6 35

" 2 1/2 " 8 80

" 3 " 10 75

" 3 1/2 " 14 80

Malleable Fittings—Discount 20 p.c.

Cast Iron Fittings—

Standard, 57 1/2 per cent.; unions, 55 per cent.; on nipples, headers and flanged unions, 60 per cent.

PLUMBERS' BRASS GOODS.

Standard Compression work, dia. 60 & 10 p.c.

Cushion work, discount 50 per cent.

Fuller work, discount 70 per cent.

6 dozen lots and over of the above, extra discount 10 per cent.

Lever handle Stops and Waste, discount 60 per cent. With in lots of 2 dozen and over an extra discount of 10 per cent.

J.M.T. Globe, Angle and Check Valves, discount 55 per cent.

Standard Globe, Angle and Check Valves, discount 65 per cent.

Kerr's special standard globes and angles, discount 60 per cent.

Kerr's Jenkin disc, copper-alloy disc and heavy standard valves, discount 60 per cent.

Kerr's standard brass checks, discount 60 p.c.

Kerr's standard brass disc steam radiator valves, discount 70 per cent.

Kerr's Jenkin disc, copper-alloy disc radiator valves, discount 70 per cent.

Kerr's quick-opening hot water radiator valves, discount 70 and 10 per cent.

Weber's (Kerr) patent straightway gate valves, brass, discount 55 per cent.

Weber's (Kerr) patent straightway gate valves, I.B.B.M., discount 70 per cent.

J.M.T. Radiator Valves discount 55 per cent.

Standard Radiator Valves, discount 65 per cent.

Patent Quick-Opening Valves, discount 65 per cent.

No. 1 compression bath cock. net 1 75

No. 4 " " 1 90

No. 7 Fuller's. " " 2 10

No. 4 1/2 " " 2 25

Patent Compression Cushion, basin cock, hot and cold. " per doz. 15 00

Patent Compression Cushion, bath cock, No. 2208. " 2 25

Square head brass cocks, discount 55 per cent. " iron " 50 to 60

Thompson Smoke-test Machine \$25.00

RANGE BOILERS.



# American Steel & Wire Co.

New York  
Empire Building

Montreal  
N. Y. Life Building

Chicago  
The Rookery

## BARBED WIRE GALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

### PAINTS AND OILS.

#### COLORS IN OIL.

##### 1-lb. tins, pure.

|                        |      |
|------------------------|------|
| Venetian red, per lb.  | 0 08 |
| Chrome yellow          | 0 15 |
| Golden ochre           | 0 08 |
| French                 | 0 06 |
| Marine black           | 0 04 |
| Chrome green           | 0 10 |
| French permanent green | 0 13 |
| Signwriters' black     | 0 15 |

#### COLORS DRY.

| Pure in bbls., per cwt.          | Less than this quantity to extra. |
|----------------------------------|-----------------------------------|
| Common ochre, bbls.              | 2 50                              |
| Yellow ochre                     | 1 12 1/2                          |
| Brusels ochre                    | 2 75                              |
| Venetian red                     | 1 50 2 25                         |
| English oxides                   | 3 00 3 25                         |
| American oxides                  | 1 25 2 75                         |
| Canadian red oxides              | 1 50                              |
| Super magnetic oxides, 93 p.c.   | 2 00                              |
| Burnt sienna                     | 9 00                              |
| Raw umber                        | 6 00 7 00                         |
| Drop black                       | 12 00                             |
| Chrome yellow                    | 0 18                              |
| Chrome greens                    | 5 50                              |
| French green                     | 0 09                              |
| Golden ochre                     | 2 75                              |
| Ultramarine blue, in 28-lb. bxs  | 7 00 10 00                        |
| Fire proof mineral               | 1 00                              |
| Genuine Eng. Litharge            | 4 50                              |
| Mortar color                     | 1 00                              |
| Pure Indian red, lb.             | 0 09                              |
| Whiting, bbl.                    | 0 65                              |
| English vermilion in 30-lb. bgs. | 0 65                              |

#### WHITE LEAD.

| Pure.                         | Per 100 lb. |
|-------------------------------|-------------|
| No. 1                         | 4 75        |
| No. 2                         | 4 50        |
| No. 3                         | 4 25        |
| No. 4                         | 3 87 1/2    |
| No. 4                         | 3 50        |
| Munro's Select Flake White    | 4 75        |
| Elephant and Decorators' Pure | 4 75        |
| Monarch                       | 5 00        |
| Decorator's Pure              | 4 75        |
| Essex Genuine                 | 4 25        |
| Sterling Pure                 | 5 00        |
| Island City Pure              | 5 00        |
| Ramsay's Pure Lead            | 5 00        |
| Ramsay's Exterior             | 4 50 4 75   |

#### RED LEAD.

|                                 |        |        |
|---------------------------------|--------|--------|
| Genuine, 560 lb. casks, per cwt | \$4 25 | \$4 50 |
| Genuine, 100 lb. kegs.          | 4 25   | 4 75   |
| No. 1, 560 lb. casks, per cwt   | 4 00   | 4 00   |
| No. 1, 100 lb. kegs, per cwt    | 4 25   | 4 25   |

#### WHITE ZINC.

|                |      |          |
|----------------|------|----------|
| Extra Red Seal | 0 06 | 0 08     |
| French V. M.   | 0 06 | 0 06 1/2 |
| Lehigh         | 0 06 | 0 06 1/2 |

#### DRY WHITE LEAD.

|              |      |
|--------------|------|
| Pure, casks  | 4 25 |
| Pure, kegs   | 4 50 |
| No. 1, casks | 4 00 |
| No. 1, kegs  | 4 25 |

#### PREPARED PAINTS.

##### In 1/2, 1 and 1-gallon tins.

|                                 |       |
|---------------------------------|-------|
| Pure, per gallon                | 1 20  |
| Second qualities, per gallon    | 1 00  |
| Barn (in bbls.)                 | 0 60  |
| The Sherwin-Williams paints     | 1 30  |
| Canada Paint Co.'s pure         | 1 25  |
| Toronto Lead & Color Co.'s pure | 1 25  |
| Sanderson Peary's pure          | 1 20  |
| Standard Co.'s "New Era"        | 1 30  |
| "Globe" barn                    | 60 70 |
| Francis-Frost Co.'s "Ark" B'd   | 1 25  |
| British Navy deck               | 1 50  |
| Henderson & Potts's "Anchor"    | 1 35  |
| Ramsay's paints, Pure, per gal. | 1 20  |
| Thistle                         | 1 00  |
| "Outside, bbls                  | 0 55  |
| Island City House Paint         | 1 25  |
| "Floor                          | 1 25  |
| Sterling House Paint            | 1 20  |
| "Floor                          | 1 10  |
| National                        | 1 25  |

### PUTTY.

|                                            |      |
|--------------------------------------------|------|
| Bulk in bbls.                              | 1 45 |
| Bulk in less quantity                      | 1 70 |
| Bladders in bbls.                          | 1 10 |
| Bladders in kegs, boxes or loose           | 1 85 |
| 25-lb. tins                                | 1 80 |
| 12 1/2 lb. tins                            | 2 05 |
| Bladders in bulk or tins less than 100 lb. | 1 85 |

### VARNISHES.

#### In 5-gal. lots. Per gal. Net.

|                                                                  |          |      |
|------------------------------------------------------------------|----------|------|
| Carriage, No. 1                                                  | 1 50     | 1 60 |
| Pale durable body                                                | 4 10     | 4 25 |
| "rubbing                                                         | 2 85     | 3 20 |
| Gold size, Japan                                                 | 1 50     | 1 60 |
| No. 1 brown Japan                                                | 0 85     | 0 90 |
| Elastic oak                                                      | 1 50     | 1 50 |
| Furniture, extra                                                 | 1 10     | 1 25 |
| "No. 1                                                           | 0 90     | 1 00 |
| Hard oil finish                                                  | 1 35     | 1 50 |
| Light oil finish                                                 | 1 60     | 1 70 |
| Damar                                                            | 1 75     | 2 00 |
| Shellac, white                                                   | 2 40     | 2 50 |
| "orange                                                          | 2 30     | 2 40 |
| Purpentine, brown Japan                                          | 1 10     | 1 20 |
| "black Japan                                                     | 1 10     | 1 20 |
| "No. 1                                                           | 0 85     | 0 90 |
| Elastilite varnish, 1 gal. can, each                             | 2 00     | 2 75 |
| Granitine floor finish, per gal                                  | 1 10     | 1 20 |
| Maple Leaf coach enamels; size 1, size 2, 70c; size 3, 40c. each | \$1.20   |      |
| Sherwin-Williams' kopal varnish, case, from 1 gal., \$2.50.      | assorted |      |

### OLIVE.

|                  |      |          |
|------------------|------|----------|
| Common           | 0 08 | 0 08 1/2 |
| French medal     | 0 10 | 0 14     |
| White, extra     | 0 18 | 0 22     |
| Gelatine         | 0 18 | 0 20     |
| Strip            | 0 18 | 0 20     |
| Coopers          | 0 19 | 0 20     |
| Huttner          | 0 12 | 0 16     |
| Ground           | 0 12 | 0 16     |
| Cologne, genuine | 0 12 | 0 16     |

### HARDWARE.

#### AMMUNITION.

##### Cartridges.

|                                                                                                                       |  |
|-----------------------------------------------------------------------------------------------------------------------|--|
| R. B. Caps Dominion, 50 and 25 per cent.                                                                              |  |
| Rim Fire Pistol, discount 30 p.c., American.                                                                          |  |
| Rim Fire Cartridges, Dominion, 50 and 5 p.c.                                                                          |  |
| Central Fire, Military and Sporting, American, add 20 per cent. to list. B. B. Caps, discount 40 per cent., American. |  |
| Central Fire Pistol and Rifle, 5 p.c., Amer.                                                                          |  |
| Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.                                                         |  |
| Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.                                                |  |
| Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.                                         |  |
| Rival and Nitro, 10 per cent. advance on list.                                                                        |  |
| Brass Shot Shells, 55 per cent.                                                                                       |  |
| Primers, Dom., 30 per cent.; American, \$1.75                                                                         |  |

### Wads.

| Best thick brown or grey felt wads, in 1/2-lb. bags                                 | per lb.     |
|-------------------------------------------------------------------------------------|-------------|
| Best thick white card wads, in boxes of 500 each, 12 and smaller gauges             | 80 70       |
| Best thick white card wads, in boxes of 500 each, 10 gauge                          | 0 99        |
| Thin card wads, in boxes of 1,000 each, 12 and smaller gauges                       | 0 35        |
| Thin card wads, in boxes of 1,000 each, 10 gauge                                    | 0 20        |
| Chemically prepared black edge grey cloth wads, in boxes of 250 each                | Per M. 0 25 |
| 11 and smaller gauge                                                                | 0 60        |
| 9 and 10 gauges                                                                     | 0 70        |
| 7 and 8 "                                                                           | 0 90        |
| 5 and 6 "                                                                           | 1 10        |
| Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each |             |
| 11 and smaller gauge                                                                | 1 15        |
| 9 and 10 gauges                                                                     | 1 40        |
| 7 and 8 "                                                                           | 1 65        |
| 5 and 6 "                                                                           | 1 90        |

### ADZES.

|                             |          |
|-----------------------------|----------|
| Discount 20 per cent.       |          |
| Wright's, 80-lb. and over   | 0 10 1/2 |
| Hay Budden, 80-lb. and over | 0 09 1/2 |
| Brooks's, 80-lb. and over   | 0 11 1/2 |

### APPLE PARERS.

|                                                  |      |
|--------------------------------------------------|------|
| Woodyatt Hudson, per doz., net                   | 4 60 |
| Gilmour's, discount 65 and 5 per cent. off list. |      |

### AXES.

|                          |             |
|--------------------------|-------------|
| Chopping Axes            |             |
| Single bit, per doz.     | 7 00 10 00  |
| Double bit, " "          | 10 00 18 00 |
| Bench Axes, 40 per cent. |             |
| Broad Axes, 25 per cent. |             |
| Hunters' Axes            | 5 50 6 00   |
| Boys' Axes               | 6 25 7 00   |
| Splitting Axes           | 7 00 12 00  |
| Handled Axes             | 10 00       |

### AMERICAN AXE AND TOOL CO.

|                                        |             |
|----------------------------------------|-------------|
| Red Ridge, boys', handled              | 5 75        |
| "hunters"                              | 5 25        |
| Underhill American Bench Axes, 40 p.c. |             |
| Ordinary, per gross                    | 6 00 7 00   |
| Best quality                           | 10 00 12 00 |

### AXLE GREASE.

|                      |  |
|----------------------|--|
| Brass, 60 per cent.  |  |
| Nickel, 55 per cent. |  |

### BELLS.

|                                          |  |
|------------------------------------------|--|
| American make, discount 63 1/2 per cent. |  |
| Canadian, discount 45 and 50 per cent.   |  |

### DOOR.

|                                                         |           |
|---------------------------------------------------------|-----------|
| Gongs, Sargent's                                        | 5 50 8 00 |
| "Peterboro", discount 50 and 10 per cent. off new list. |           |

### Farm.

|                |           |
|----------------|-----------|
| American, each | 1 25 3 00 |
|----------------|-----------|

### House.

|                   |           |
|-------------------|-----------|
| American, per lb. | 0 35 0 40 |
|-------------------|-----------|

### BELLOWS.

|                                     |            |
|-------------------------------------|------------|
| Hand, per doz                       | 3 35 4 75  |
| Moulders, per doz.                  | 7 50 10 00 |
| Blacksmiths', discount 40 per cent. |            |

### BELTING.

|                                                      |  |
|------------------------------------------------------|--|
| Extra, 60 per cent.                                  |  |
| Standard, 60 and 10 per cent.                        |  |
| No. 1, not wider than 6 in., 60, 10 and 10 per cent. |  |
| Agricultural, not wider than 4 in., 75 per cent.     |  |

### BITS.

|                                          |  |
|------------------------------------------|--|
| Gilmour's, discount 60 per cent.         |  |
| Rockford's, discount 50 and 10 per cent. |  |
| Jennings' Gen., net list.                |  |

### Car.

|                             |  |
|-----------------------------|--|
| Gilmour's, 47 1/2 per cent. |  |
|-----------------------------|--|

### Expansive.

|                       |  |
|-----------------------|--|
| Clark's, 40 per cent. |  |
|-----------------------|--|

### Gimlet.

|                           |           |
|---------------------------|-----------|
| Clark's, per doz          | 0 65 0 90 |
| Diamond, Shell, per doz.  | 1 00 1 50 |
| Nail and Spike, per gross | 2 25 5 20 |

### BLIND AND RED STAPLES.

|                    |               |
|--------------------|---------------|
| All sizes, per lb. | 0 07 1/2 0 12 |
|--------------------|---------------|

### BOLTS AND NUTS.

|                                   |           |
|-----------------------------------|-----------|
| Carriage Bolts, common (\$1 list) |           |
| " " 3-16 and 1/2 "                | 60 and 10 |
| " " 7-16 and 1/2 "                | 55 and 5  |
| " " full sq. (\$2 40 list)        | 60 and 5  |
| " " Norway Iron (\$3 list)        | 60        |

### Machine Bolts, all sizes, 1 and less.

|                                                |          |
|------------------------------------------------|----------|
| Machine Bolts, 7-16 and up                     | 60       |
| Plough Bolts                                   | 55 and 5 |
| Blank Bolts                                    | 55 and 5 |
| Bolt Ends                                      | 55 and 5 |
| Sleigh Shoe Bolts                              | 70       |
| Coach Screws, cone point                       | 70       |
| Nuts, square, all sizes, 4c. per lb. off.      |          |
| Nuts, hexagon, all sizes, 4 1/2c. per lb. off. |          |
| Stove Rods per lb., 5 1/2 to 6c.               |          |

### BOOT CALK.

|                        |             |
|------------------------|-------------|
| Small and medium, ball | per M. 4 25 |
| Small heel             | 4 50        |

### BRIGHT WIRE GOODS.

|                           |  |
|---------------------------|--|
| Discount 62 1/2 per cent. |  |
|---------------------------|--|

### BUTCHERS' CLEAVERS.

|          |          |       |       |
|----------|----------|-------|-------|
| German   | per doz. | 6 00  | 9 00  |
| American | " "      | 12 00 | 18 00 |

### BUTCHER KNIVES.

|          |          |      |      |
|----------|----------|------|------|
| Barley's | per doz. | 0 60 | 4 30 |
|----------|----------|------|------|

### BUILDING PAPER, ETC.

|                     |  |  |
|---------------------|--|--|
| BUILDING PAPER, ETC |  |  |
|---------------------|--|--|

### BULL RINGS.

|                                                      |  |
|------------------------------------------------------|--|
| Copper, \$2.00 for 2 1/2-inch, and \$1.90 or 2-inch. |  |
|------------------------------------------------------|--|

### BUTTS.

|                                  |  |
|----------------------------------|--|
| Wrought Brass, net revised list. |  |
| Cast Iron                        |  |

|                                  |  |
|----------------------------------|--|
| Loose Pin, discount 60 per cent. |  |
|----------------------------------|--|

### Wrought Steel.

|                                                 |                    |
|-------------------------------------------------|--------------------|
| Fast Joint, discount 65, 10 and 2 1/2 per cent. |                    |
| Loose Pin, discount 65, 10 and 2 1/2 per cent.  |                    |
| Berlin Bronzed, discount 70, 70 and 5 per cent. |                    |
| Gen. B. bronzed                                 | per pair 0 40 0 65 |

### CARPET STRETCHERS.

|           |          |      |      |
|-----------|----------|------|------|
| American  | per doz. | 1 00 | 1 50 |
| Bullard's | " "      | 6 50 |      |

### CASTORS.

|                                                |  |
|------------------------------------------------|--|
| Bed, new list, discount 55 to 57 1/2 per cent. |  |
| Plate, discount 52 1/2 to 57 1/2 per cent.     |  |

### CATTLE LEADERS.

|                |           |      |      |
|----------------|-----------|------|------|
| Nos. 32 and 33 | per gross | 7 50 | 8 50 |
|----------------|-----------|------|------|

### CHALK.

|                                |           |           |
|--------------------------------|-----------|-----------|
| Carpenters' Colored, per gross | 0 45      | 0 75      |
| White lump                     | per cwt.  | 0 60 0 65 |
| Red                            | " "       | 0 05 0 08 |
| Crayon                         | per gross | 0 14 0 18 |

### CHISELS.

|                                                |  |
|------------------------------------------------|--|
| Socket, Framing and Firmer.                    |  |
| Broad's, discount 60 and 10 per cent.          |  |
| Warneck's, discount 50 and 10 per cent.        |  |
| P. S. & W. Extra, discount 60 and 10 per cent. |  |

### FOODS-STOCK.

|                                      |        |
|--------------------------------------|--------|
| Colonial Stock Foods, 50c. packages, |        |
| per doz                              | \$4 00 |
| " " " 25c. pkgs., " "                | 2 00   |
| " " " 10c. " "                       | 75     |
| " " " 25-lb. pail, each              | 1 30   |
| Poultry Foods, 25c. packages         | 1 25   |
| Cough Powders, per doz.              | 1 25   |
| Worm                                 | 1 25   |

|                                          |      |
|------------------------------------------|------|
| International Stock Foods, \$1 packages, |      |
| per doz.                                 | 8 50 |
| International Stock Foods, per pail      | 2 75 |

|                                                          |       |
|----------------------------------------------------------|-------|
| " Poultry " \$1 packages                                 | 4 50  |
| " Worm Powders, per gross                                | 4 00  |
| " Pine Headed Oil, per gal.                              | 5 00  |
| " Phenol Compound, per doz                               | 8 00  |
| " Hoof Conditioner                                       | 8 00  |
| " Compound, per doz.                                     | 16 00 |
| Also 25c. pkgs. at 2c. per doz. 50c. pkgs. at 4 per doz. |       |

### CLIPS.

|                            |  |
|----------------------------|--|
| Axe, discount 65 per cent. |  |
|----------------------------|--|



# An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

## The Paterson Mfg. Co., Limited

Toronto and Montreal.

### COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

#### CONDUCTOR PIPE.

Plain or Corrugated.

|             |              |      |
|-------------|--------------|------|
| 2-inch..... | per 100 feet | 3 00 |
| 3 ".....    | " "          | 4 00 |
| 4 ".....    | " "          | 5 25 |
| 5 ".....    | " "          | 6 75 |
| 6 ".....    | " "          | 9 00 |

#### CRADLES, GRAIN.

Canadian, discount 20 to 25 per cent.

#### CROSSCUT SAW HANDLES.

|                      |          |       |
|----------------------|----------|-------|
| 8 & D, No. 3.....    | per pair | 0 17½ |
| 8 & D, " 5.....      | " "      | 0 22½ |
| 8 & D, " 6.....      | " "      | 0 15  |
| Boynton pattern..... | " "      | 0 20  |

#### DOOR SPRINGS.

|                       |          |           |
|-----------------------|----------|-----------|
| Torrey's Rod.....     | per doz. | 1 75      |
| Coil, 9 to 11 in..... | " "      | 0 95 1 65 |
| English.....          | " "      | 2 00 4 00 |

#### DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

#### DRILLS.

Hand and Breast.

Miller's Falls, per doz., net list.

#### DRILL BITS.

Morse, discount 37½ to 40 per cent.

Standard, discount 50 and 5 to 55 per cent.

#### FAUCETS.

Common, cork-lined, discount 35 per cent.

#### EAVETROUGHS.

10-inch.....per 100 ft. 10 00

#### ELBOWS (stovepipe.)

|                                 |          |      |
|---------------------------------|----------|------|
| 5 and 6-inch, common.....       | per doz. | 1 20 |
| 7-inch.....                     | " "      | 1 35 |
| Polished, 15c. per dozen extra. | " "      |      |

#### ESCUTCHEONS.

Discount 50 and 10 per cent., new list

#### ESCUTCHEON PINS.

Iron, discount 40 per cent.

#### FACTORY MILK CANS.

Discount off revised list, 40 per cent.

#### FILES AND RAMPS.

Great Western.....70 and 10 per cent.

Arade.....70 " 10 "

Earnley & Foot.....70 " 10 "

Dawson's.....70 " 10 "

American.....70 " 10 "

J. Barton Smith.....70 " 10 "

McGellan.....70 " 10 "

Eagle.....70 " 10 "

Nicholson, 60 and 10 to 60, 10 and 5 "

Royal.....80 " "

Globe.....70 to 75 " "

Black Diamond, 60 and 10 to 60, 10 and 5 per cent.

Jowett's, English list, 25 to 27½ per cent.

Nicholson File Co's " Simplicity " file handle, per gross 85c. to \$1 50

#### GLASS.

Window. Box Price.

| Size United Inches.   | Per 50 ft. | Star Per 100 ft. | D Diamond Per 50 ft. | Per 100 ft. |
|-----------------------|------------|------------------|----------------------|-------------|
| Under 26.....         | 3 80       |                  | 5 06                 |             |
| 26 to 40.....         | 4 00       |                  | 5 44                 |             |
| 41 to 50.....         | 4 50       |                  | 6 36                 |             |
| 51 to 60.....         | 4 75       |                  | 7 50                 |             |
| 61 to 70.....         | 5 00       |                  | 8 62                 |             |
| 71 to 80.....         | 5 30       |                  | 9 38                 |             |
| 81 to 85.....         |            |                  | 10 75                |             |
| 86 to 90.....         |            |                  | 12 30                |             |
| 91 to 95.....         |            |                  | 15 00                |             |
| 96 to 100.....        |            |                  | 18 00                |             |
| Discount 15 per cent. |            |                  |                      |             |

### GAUGES.

Marking, Mortise, Etc.

Stanley's, discount 50 to 55 per cent.

#### Wire Gauges.

Winn's, Nos. 26 to 33.....each 1 65 2 40

#### GILLET'S POWDERED LYE.

1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.

#### HALTERS.

|                       |           |       |
|-----------------------|-----------|-------|
| Rope, 1-inch.....     | per gross | 12 00 |
| Rope, 1 1/2 ".....    | " "       | 9 00  |
| Rope, 2 ".....        | " "       | 14 00 |
| Leather, 1-inch.....  | per doz.  | 4 00  |
| Leather, 1 1/2 "..... | " "       | 5 20  |
| Web.....              | " "       | 2 45  |

#### HAMMERS.

Nail.

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

#### Tack.

Magnetic.....per doz. 1 10 1 20

#### Sledge.

Canadian.....per lb. 0 07½ 0 08½

#### Ball Peen.

English and Canadian, per lb. 0 22 0 25

#### HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00

Store door.....per doz. 1 00 1 50

#### Fork.

C. & B., discount 40 per cent., revised list.

#### Hoe.

C. & B., discount 40 per cent., revised list.

#### Saw.

American.....per doz. 1 00 1 25

#### Plane.

American.....per gross 3 15 3 75

#### Hammer and Hatchet.

Canadian, discount 40 per cent.

#### HANGERS.

doz. pairs.

Steel barn door.....8 00 10 00

Stearns, 4-inch.....4 50

" 5-inch.....6 00

Zenith.....9 00

Lane's covered—

No. 11, 5-foot run.....8 40

No. 11½, 10-foot run.....10 80

No. 12, 10-foot run.....12 60

No. 14, 15-foot run.....21 00

Steel, covered.....4 00 11 00

" track, 1 x 3-16 in (100 ft).....3 75

" " 1 x 3-16 in (100 ft).....4 75

#### HARVEST TOOLS.

Discount 60 per cent.

#### HATCHETS.

Canadian, discount 40 to 42½ per cent.

Shingle, Red Ridge 1, per doz.....4 40

" 2.....4 85

Barrel, Underhill.....5 00

#### HAT ENAMEL.

Henderson & Potts' "Anchor Brand"

#### HINGES.

Blind, Parkers, discount 60 per cent.

Heavy T and strap, 4-in., per lb.....0 06½

" " 5-in., ".....0 06½

" " 6-in., ".....0 06

" " 8-in., ".....0 05½

" " 10-in., ".....0 05½

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge.....4 50

6 to 10 in.....per 100 lb. 3 25

12 in. up.....3 25

Spring, No. 20, per gro. pairs.....10 50

#### HOES.

Garden, Mortar, etc., discount 60 per cent.

Planter.....per doz. 4 00 4 50

#### HOLLOW WARE.

Tinned cast, 35 per cent.

#### HOOKS.

Cast Iron.....per doz. 0 50 1 0

Clothes line, No. 61.....0 00 0 70

Harness.....0 60 12 00

Hat and coat.....per gro. 1 10 10 00

Chandelier.....per doz. 0 50 1 00

#### Wrought Iron.

Wrought hooks and staples Canadian discount 60 per cent.

#### Wire.

Hat and coat, discount 60 per cent.

Reel.....per 1,000 0 60

Screw, bright, discount 60 per cent.

#### HORSE NAILS.

"C" brand, 40, 10 and 7½ per cent. off list { Oval

"M" brand, 55, per cent. { head

Countersunk, 57½ per cent.

"Monarch," 50 and 7½ per cent.

"Peerless" 50 per cent. dis.

#### HORSESHOES.

F.O.B. Montreal

No. 2 No. 1

and larger smaller.

Iron Shoes.

Light, medium and heavy.....3 65 3 90

Snow shoes.....3 90 4 15

#### Steel Shoes.

XL sizes 1 to 5.....6 35

Light, No. 2 and larger.....3 80

No. 1 and smaller.....4 05

Featherweight, all sizes 0 to 4.....5 35

Toeweight, all sizes 1 to 4.....6 60

#### JAPANESE WARE.

Discount 50 per cent.

#### ICE PICKS.

Star.....per doz. 00 3 25

#### RETTLES.

Brass spun 7½ per cent. discount off new list.

Copper.....per lb. 0 30 0 50

American, 60 and 10 to 65 and 5 per cent.

#### KEYS.

Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock.

American.....per gross 0 60

#### KNOBS.

Door, japanned and N.P., per

doz. 1 50 2 50

Bronze, Berlin.....per doz. 2 75 3 25

Bronze, Genuine.....6 00 9 00

Shutter, porcelain, F. & L.

screw.....per gross 1 30 00

White door knobs.....per doz. 2 00

#### HAY KNIVES.

Net prices.

#### LAMP WICKS.

Discount, 60 per cent.

#### LANTERNS.

Cold Blast.....per doz. 7 00

No. 3, "Wrights".....8 50

Ordinary, with O burner.....4 00

Dashboard, cold blast.....9 00

No. 0.....5 75

Japanning, 50c. per doz. extra.

#### LEMON SQUEEZERS.

Porcelain lined.....per doz. 2 20 5 60

Galvanized.....1 87 3 85

King, wood.....2 75 2 90

King, glass.....4 00 4 50

All glass.....0 50 0 90

#### LINE.

Fish.....per gross 1 05 2 50

Chalk.....1 90 7 40

#### LAWN MOWERS.

Woodyatt, 10½-in. wheel, 14-in. cut.....8 50

Star, 9-in. ".....7 00

Daisy, 8-in. " (net) 2 87½

Philadelphia, 7½-in. ".....7 00

Ontario, 7½-in. ".....15 80

King Edward, 12-in. ".....9 50

Discount, 50 per cent., with freight concessions in quantity shipments.

#### Maxwell & Sons:

10½-in. high wheel.....7 50 10 00

9-in. ".....5 50 6 25

8-in. ".....4 90 5 50

Discount 50 per cent.

#### LOCKS.

Canadian, 50 to 50 and 10 per cent.

Russell & Erwin.....per doz.

### Cabinet.

Eagle, discount 30 per cent.

### Padlocks.

English and Am.....per doz. 0 50 6 00

Eagle, discount 20 to 25 per cent.

### MACHINE SCREWS.

Iron and Brass.

Flat head, discount 25 per cent.

Round head, discount 20 per cent.

### MALLETS.

Tinsmiths'.....per doz. 1 25 1 50

Carpenters' hickory, " 1 25 3 75

Lignum Vitae.....3 85 5 00

Caulking, each.....0 60 2 00

### MATTOCKS.

Canadian.....per doz. 5 50 6 00

### MEAT CUTTERS.

American, discount 3½ per cent.

German, 15 per cent.

Gem.....each 1 15



# The New U.M.C. 33 Primers

give an added ballistic value to the powder and shot charges in all U. M. C. smokeless powder shells.

## THE NO. 3 U. M. C. PRIMERS

were the first and best primers for smokeless powder ever made here or abroad—until the advent of the new U.M.C. 33 primers, which were substituted for them some time ago.

The U.M.C. Southern Squad used shells primed with the new 33 primers.

## The Union Metallic Cartridge Co.

Agency, 313 Broadway, New York, N.Y.

Factory, BRIDGEPORT, CONN

|                                                 |                      |                                                   |                       |                                               |                    |                                                         |                        |
|-------------------------------------------------|----------------------|---------------------------------------------------|-----------------------|-----------------------------------------------|--------------------|---------------------------------------------------------|------------------------|
| <b>PLANE IRONS.</b>                             |                      | <b>SAP SPOUTS.</b>                                |                       | <b>STAPLES.</b>                               |                    | <b>ENAMELLED WARE.</b>                                  |                        |
| English                                         | per doz. 2 00 5 00   | Bronzed iron with hooks                           | per 1,000 7 50        | Galvanized                                    | 3 00               | White, Princess, Turquoise, Blue and White              | discount 70 per cent   |
| <b>PLIERS AND NIPPERS.</b>                      |                      | "Eureka" tinned steel, hooks                      | 8 00                  | Plain                                         | 2 80               | Diamond, Famous, Premier, discount 50 and               | 10 per cent            |
| Button's genuine, per doz. pairs, discount      |                      | <b>SAWS.</b>                                      |                       | Coppers, discount 45 per cent                 |                    | Granite or Pearl, Imperial, Crescent, discount          | 50, 10 and 10 per cent |
| 37 1/2 to 40 per cent.                          |                      | Hand, Disston's, discount 12 1/2 per cent         |                       | Poultry netting staples, discount 40 per cent |                    | Premier steel wire, 40 per cent                         |                        |
| Button's imitation, per doz. 5 00 9 00          |                      | S & D, discount 40 per cent.                      |                       | <b>STOCKS AND DIES.</b>                       |                    | "Star" decorated steel and decorated white,             | 25 per cent            |
| German                                          | 0 60 60              | Crosscut, Disston's, per foot 0 35 0 55           |                       | American discount 25 per cent                 |                    | <b>WIRE.</b>                                            |                        |
| <b>PRESSED SPIKES.</b>                          |                      | S & D, discount 35 per cent on Nos. 2 and 3.      |                       | <b>STONE.</b>                                 |                    | <b>Smooth Steel Wire.</b>                               |                        |
| Discount 20 per cent.                           |                      | Hack, complete, each 0 75 2 75                    |                       | Washta                                        | per lb. 0 28 0 60  | No. 0-9 gauge                                           | \$2 50                 |
| <b>PULLEYS.</b>                                 |                      | " frame only, each 0 50 1 25                      |                       | Hindostan                                     | 0 06 0 07          | 10 "                                                    | 60 extra               |
| Hothouse                                        | per doz. 0 55 1 00   | <b>SASH WEIGHTS.</b>                              |                       | " slip                                        | 0 02 0 09          | 11 "                                                    | 120 "                  |
| Awning                                          | 0 22 0 33            | Sectional                                         | per 100 lb. 2 00 2 25 | Labrador                                      | 0 13 0 17          | 12 "                                                    | 200 "                  |
| Screw                                           | 0 27 1 00            | Solid                                             | 1 50 1 75             | " Axe                                         | 0 15 0 50          | 13 "                                                    | 300 "                  |
| Awning                                          | 0 35 2 50            | Per lb.                                           | 0 28 0 30             | Turkey                                        | 0 50 1 50          | 14 "                                                    | 400 "                  |
| <b>PUMPS.</b>                                   |                      | <b>SASH CORD.</b>                                 |                       | Arkansas                                      | 0 10 0 10          | 15 "                                                    | 500 "                  |
| Canadian cistern                                | 1 80 3 60            | Per lb.                                           | 0 28 0 30             | Water-of-Ayr                                  | 3 50 5 00          | 16 "                                                    | 700 "                  |
| Canadian pitcher spout                          | 1 40 2 10            | <b>SAW SETS.</b>                                  |                       | Grind, 2-in. 40 to 200 lb. per ton            | 25 00 28 00        | <b>Ad. 60c. for coppering and 92 for tinning.</b>       |                        |
| <b>PUNCHES.</b>                                 |                      | Lincoln and Whiting                               | 4 75                  | " under 40 lb.                                | 29 00              | <b>Extra net per 100 lb. 60c. for baling wire.</b>      |                        |
| Saddler's                                       | per doz. 1 00 1 85   | Hand Sets, Perfect                                | 4 00                  | " under 2 in. thick.                          | 29 00              | <b>spring wire \$1.25, special hay baling wire 30c.</b> |                        |
| Conductors                                      | 3 00 15 00           | X-Cut Sets,                                       | 7 50                  | <b>STOVEPIPES.</b>                            |                    | <b>best steel wire 75c, bright soft drawn 15c.</b>      |                        |
| Tinners, solid                                  | 0 72                 | <b>SCALES.</b>                                    |                       | 5 and 6 inch, per 100 lengths                 | 7 00               | <b>charcoal (extra quality) \$1.25, packed in casks</b> |                        |
| " hollow                                        | per inch 1 00        | Gurney Standard, 40 per cent.                     |                       | 7 inch                                        | 7 50               | <b>or cases 15 " bagging and papering 10c. 50</b>       |                        |
| <b>RAKES.</b>                                   |                      | Gurney Champion, 50 per cent.                     |                       | <b>ENAMELINE STOVE POLISH.</b>                |                    | <b>and 100-lb. bundles 10c. in 25-lb. bundles</b>       |                        |
| Wood                                            | per doz. net 1 20 up | Burrow, Stewart & Milne—                          |                       | No. 4, 3 doz. in case, net cash               | 4 80               | <b>15c. in 5 and 10-lb. bundles 25c. in 1-lb.</b>       |                        |
| <b>RAZORS.</b>                                  |                      | Imperial Standard, discount 40 per cent.          |                       | No. 5, 3 doz. in case                         | 8 40               | <b>hanks 50c. in 1-lb. hanks 75c. in 1-lb.</b>          |                        |
| Elliot's                                        | 4 00 18 00           | Weight Beams, discount 35 per cent.               |                       | <b>TACKS, BRADS, ETC.</b>                     |                    | <b>Fine Steel Wire, discount 25 per cent.</b>           |                        |
| Geo. Butler's & Co.'s                           | 4 00 18 00           | Champion Scales, discount 50 per cent.            |                       | Carpet tacks, blued                           | 80 and 15          | <b>List of extras. In 100-lb. lots—No. 17,</b>          |                        |
| Roker's                                         | 7 50 11 00           | Fairbanks standard, discount 35 per cent.         |                       | " (tinned)                                    | 80 and 20          | <b>\$5—No. 18, \$5.50—No. 19, \$6—No. 20, \$6.50—</b>   |                        |
| " King Cutter                                   | 12 50 15 00          | " Dominion, discount 55 per cent.                 |                       | " (in legs)                                   | 80                 | <b>No. 21, \$7—No. 22, \$7.50—No. 23, \$8—No. 24,</b>   |                        |
| Wade & Butcher's                                | 3 00 10 00           | " Richelieu, discount 55 per cent.                |                       | Cut tacks, blued, in dozens only              | 80                 | <b>\$8—No. 25, \$9—No. 26, \$9.50—No. 27,</b>           |                        |
| Thiele & Quack's                                | 7 00 12 00           | Warren's new Standard, discount 40 per cent.      |                       | " weights                                     | 60                 | <b>\$10—No. 28, \$11—No. 29, \$12—No. 30, \$13—</b>     |                        |
| Carlo Magnetic                                  | 15 00                | " Champion, discount 50 per cent.                 |                       | Swedes cut tacks, blued and tinned—           | 80 and 10          | <b>No. 31, \$14—No. 32, \$15—No. 33, \$16—No. 34,</b>   |                        |
| Griffin No. 85                                  | 10 75                | " Weightbeams, discount 35 per cent.              |                       | In bulk                                       | 80 and 10          | <b>\$17 Extras net—tinned wire, Nos. 17, 25,</b>        |                        |
| Griffin Barber's Favorite                       | 13 00                | <b>SCREW DRIVERS.</b>                             |                       | In dozens                                     | 75                 | <b>\$22 Nos. 28, 31, 34—Nos. 35, 36, 38 Coppered,</b>   |                        |
| Griffin Safety Razors                           | 13 50                | Sargent's                                         | per doz. 0 65 1 00    | Swedes, upholsterers', bulk                   | 85, 124 and 125    | <b>5c. oiling, 10c.—in 25-lb. bundles, 15c.—in 5</b>    |                        |
| Griffin Strapping Machines                      | 23 50                | <b>SCREEN DOORS.</b>                              |                       | brush, blued and tinned                       | 70                 | <b>and 10-lb. bundles, 25c. in 1-lb. hanks, 25c.</b>    |                        |
| Lewis Bros "Klean Cutter"                       | 8 50 10 50           | Common doors, 2 or 3 panel, walnut                |                       | Swedes cut tacks, blued and tinned—           | 80 and 10          | <b>in 1-lb. hanks, 35c. in 1-lb. hanks, 50c.</b>        |                        |
| Clauess, 50 and 10 per cent.                    |                      | stained, 4-in. style                              | per doz. 6 50         | In bulk                                       | 80 and 10          | <b>packed in casks or cases, 15c. bagging or</b>        |                        |
| Clauess Stroops, 50 and 10 per cent.            |                      | Common doors, 2 or 3 panel, yellow and            |                       | Swedes, gimp, blued, tinned and               | 75 and 124         | <b>papering, 10c.</b>                                   |                        |
| <b>REGISTER.</b>                                |                      | green stained, 4-in. style                        | per doz. 6 75         | Japanned                                      | 35                 | <b>Brass wire, discount 60 per cent off the list.</b>   |                        |
| Discount 40 per cent.                           |                      | Common doors, 2 or 3 panel, in natural            |                       | Zinc tacks                                    | 35                 | <b>Copper wire, discount 60 per cent off the list.</b>  |                        |
| <b>RIVETS AND BURS.</b>                         |                      | colors, oil finish                                | per doz. 8 75         | Leather carpet tacks                          | 55                 | <b>Galvanized wire, per 100 lb.—Nos. 4 and 5,</b>       |                        |
| Iron Rivets, black and tinned, 60 and 10 p.c.   |                      | 3-in. style 20c. per dozen less.                  |                       | Copper tacks                                  | 50                 | <b>\$3.70 to \$3.79—Nos. 6, 7, 8, \$3.15 to \$3.16</b>  |                        |
| Iron Burs, discount 55 per cent.                |                      | <b>SCREWS.</b>                                    |                       | Copper nails                                  | 52 1/2             | <b>No. 9, \$2.55—No. 10, \$3.20 to \$3.21</b>           |                        |
| Extras on Iron Rivets in 1-lb. cartons, 1c.     |                      | Wood, F. H., bright and steel, discount 87 1/2    |                       | Trunk nails, black                            | 65 and 5           | <b>No. 11, \$3.25 to \$3.26—No. 12, \$2.65</b>          |                        |
| per lb.                                         |                      | per cent.                                         |                       | Trunk nails, tinned                           | 65 and 10          | <b>No. 13, \$2.75—No. 14, \$3.75 to \$3.76—No.</b>      |                        |
| Extras on Iron Rivets in 1/2-lb. cartons, 1c.   |                      | Wood, F. H., bright, dia. 82 1/2 per cent.        |                       | Clout nails, blued                            | 65 and 5           | <b>15, \$4.30—No. 16, \$4.30—Hawes sizes, Nos.</b>      |                        |
| per lb.                                         |                      | " F. H., brass, dia. 80 per cent.                 |                       | Chair nails                                   | 35                 | <b>6 to 9, \$2.27 1/2 f.o.b. Cleveland. In carlots</b>  |                        |
| Copper Rivets, with usual proportion burs, 45   |                      | " R. H., dia. 75 per cent.                        |                       | Fine finishing                                | 40                 | <b>124c. less.</b>                                      |                        |
| per cent. Cartons, 1c. per lb. extra, net       |                      | " F. H., bronze, dia. 75 per cent.                |                       | Lining tacks, in papers                       | 10                 | <b>Clothes Line Wire, regular 7 strand, No. 17,</b>     |                        |
| Copper Burs only, discount 30 and 10 per cent.  |                      | " R. H., dia. 70 per cent.                        |                       | " in bulk                                     | 15                 | <b>\$4.65, No. 18, \$2—No. 19, \$2.90—Hollow</b>        |                        |
| Extras on Tinned or Coppered Rivets, 1/2-lb.    |                      | Drive Screws, dia. 87 1/2 per cent.               |                       | Saddle nails, in papers                       | 10                 | <b>6 strand, No. 17, \$4.30, No. 18, \$2.70—No.</b>     |                        |
| cartons, 1c. per lb.                            |                      | Bench, wood                                       | per doz. 3 25 4 00    | " in bulk                                     | 15                 | <b>19, \$2.35; No. 20, \$2.30, f.o.b. Hamilton,</b>     |                        |
| <b>RIVET SETS.</b>                              |                      | iron                                              | 4 25 5 00             | <b>TAPE LINES.</b>                            |                    | <b>Toronto, Montreal.</b>                               |                        |
| Canadian, discount 35 to 37 1/2 per cent.       |                      | Set, case hardened, dia. 60 per cent.             |                       | English, ass skin                             | per doz. 2 75 5 00 | <b>WIRE FENCING.</b>                                    |                        |
| <b>ROPE, ETC.</b>                               |                      | Square Cap, dia. 50 and 5 per cent.               |                       | English, Patent Leather                       | 5 50 9 75          | <b>Galvanized barb</b>                                  |                        |
| Sisal                                           | 0 11 1/2             | Hexagon Cap, dia. 45 per cent.                    |                       | Chestermans                                   | each 0 90 2 85     | <b>discussed, plain twist</b>                           |                        |
| Pure Manila                                     | 0 14 1/2             | <b>SCYTHES.</b>                                   |                       | " steel                                       | each 0 80 8 00     | <b>Galvanized barb, f.o.b. Cleveland, \$2.55 in</b>     |                        |
| " British" Manila                               | 0 12                 | Per doz. net                                      | 6 00 9 00             | <b>TINNERS' SNIPS.</b>                        |                    | <b>less than carlots, and \$2.45 in carlots.</b>        |                        |
| Cotton, 3-16 inch and larger                    | 0 20 1/2             | <b>SCYTHE SNATHS.</b>                             |                       | Per doz.                                      | 3 00 15 00         | <b>COILED SPRING WIRE.</b>                              |                        |
| " 5-32 inch                                     | 0 25 1/2             | Canadian, discount 40 per cent.                   |                       | Chinas, discount 35 per cent.                 |                    | <b>High Carbon, No. 9</b>                               |                        |
| " 1 inch                                        | 0 25 1/2             | <b>SHEARS.</b>                                    |                       | Tin case and dairy, 75 to 75 and 10 per cent. |                    | <b>No. 11</b>                                           |                        |
| Russia Deep Sea                                 | 0 16                 | Chinas, nickel, discount 40 per cent.             |                       | <b>THERMOMETERS.</b>                          |                    | <b>No. 12</b>                                           |                        |
| Jute                                            | 0 09                 | Chinas, Japan, discount 67 1/2 per cent.          |                       | Game, Newhouse, discount 25 per cent.         |                    | <b>WIRE CLOTH.</b>                                      |                        |
| Lath Yarn, single                               | 0 10                 | Chinas, tailors, discount 40 per cent.            |                       | Game, H & N, P. S. & W., 65 per cent.         |                    | <b>Painted Screen, per 100 sq ft, net</b>               |                        |
| " double                                        | 0 10 1/2             | Seymour's, discount 50 and 10 per cent.           |                       | Game, steel, 72 1/2, 75 per cent.             |                    | <b>Terms, 2 per cent. off 30 days.</b>                  |                        |
| Sisal bed cord, 48 feet                         | per doz. 0 65        | <b>SHOVELS AND SPADES.</b>                        |                       | <b>TROWELS.</b>                               |                    | <b>WASHING MACHINES.</b>                                |                        |
| " 60 feet                                       | 0 80                 | Canadian, discount 45 per cent.                   |                       | Disston's, discount 10 per cent               |                    | <b>Round, reacting per doz.</b>                         |                        |
| " 72 feet                                       | 0 95                 | <b>SINKS.</b>                                     |                       | German                                        | per doz 4 75 6 00  | <b>Square</b>                                           |                        |
| <b>RULERS.</b>                                  |                      | Cast iron, 16 x 24                                | 0 85                  | S & D, discount 35 per cent                   |                    | <b>Eclipse, per doz.</b>                                |                        |
| Boxwood, discount 55 per cent.                  |                      | " 18 x 30                                         | 1 00                  | <b>TWINES.</b>                                |                    | <b>Downsall</b>                                         |                        |
| Ivory, discount 37 1/2 to 40 per cent.          |                      | " 18 x 36                                         | 1 40                  | Paz, Russian                                  | per lb. 0 27       | <b>New Century, per doz.</b>                            |                        |
| <b>SAD IRONS.</b>                               |                      | <b>SNAPS.</b>                                     |                       | Wrapping, cotton, 3-ply                       | 0 27               | <b>Connor Improved</b>                                  |                        |
| Mrs. Potts, No. 55, polished                    | per set 0 80         | Harness, German, discount 25 per cent.            |                       | Mattress                                      | per lb. 0 33 0 45  | <b>Daisy</b>                                            |                        |
| " No. 50, nickel-plated                         | 0 90                 | Lock, Andrews                                     | 4 50 11 50            | Staging                                       | 0 27 0 35          | <b>WRINGERS.</b>                                        |                        |
| Common, plain                                   | 4 50                 | <b>SOLDERING IRONS.</b>                           |                       | <b>VINES.</b>                                 |                    | <b>Leader</b>                                           |                        |
| " plated                                        | 6 50                 | 1 1/2-lb.                                         | per lb. 0 37          | Bright's                                      | 0 13 1/2           | <b>Royal Canadian</b>                                   |                        |
| <b>SAND AND EMERY PAPER.</b>                    |                      | 2-lb. or over                                     | 0 34                  | Brooks                                        | 0 12 1/2           | <b>Royal American</b>                                   |                        |
| B. & A. sand, discount, 40 and 5 per cent.      |                      | <b>SQUARES.</b>                                   |                       | Pipe Vice, Hinge, No. 1                       | 3 50               | <b>Sampson</b>                                          |                        |
| Emery, discount 40 per cent.                    |                      | Iron, No. 493                                     | per doz. 2 40 2 55    | No. 2                                         | 5 50               | <b>Lighting</b>                                         |                        |
| Garret (Rurton's), 5 to 10 per cent. advance    |                      | " No. 494                                         | 3 25 3 40             | Saw Vice                                      | 4 50 9 00          | <b>Terms, 4 months, or 3 per cent. 30 days.</b>         |                        |
| on list                                         |                      | Steel, discount 60 to 60 and 5 per cent.          |                       | <b>Blacksmiths (discount 60 per cent)</b>     |                    | <b>WHOLESALE IRON WARE.</b>                             |                        |
| <b>STAMPED WARE.</b>                            |                      | Try and Bavel, discount 50 to 52 1/2 per cent.    |                       | <b>parallel (discount) 45 per cent.</b>       |                    | <b>Canadian make, discount 40 per cent.</b>             |                        |
| Plain, discount 75 and 12 1/2 per cent. off re- |                      | <b>STAMPED WARE.</b>                              |                       | <b>Blacksmiths (discount 60 per cent)</b>     |                    | <b>parallel (discount) 45 per cent.</b>                 |                        |
| vised list.                                     |                      | Retained, discount 75 per cent. off revised list. |                       | <b>Blacksmiths (discount 60 per cent)</b>     |                    | <b>parallel (discount) 45 per cent.</b>                 |                        |



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## Business Changes

## ONTARIO.

JACOB HOSE, hardware dealer, Rat Portage, has admitted F. Canniff as partner.

Powell & Co., general merchants, Tilbury, have assigned in trust.

Reid & Griffin, general merchants, Sand Point, are winding up their business.

J. E. Langlois, general merchant, The Brook, has assigned; meeting of creditors Aug. 16.

Harry Walker, Warkworth, has purchased the hardware stock of W. Braund, Port Hope.

## QUEBEC.

S. Viner, general merchant, Rimouski, has assigned.

Jasmin & Grenir, carriage makers, Coatiquok, have assigned.

Chartrand & Paiement have registered as plumbers in Montreal.

S. H. Frigon & Co., general merchants, Three Rivers, have assigned.

A. S. Kendall & Co., general merchants, Lawrenceville, have registered.

The assets of J. E. Bergeron, general merchant, Jonquieres, have been sold.

The plumbing firm of Marchand & Campean have registered in Montreal.

The contracting firm of Guertin & Borichard have registered at Montreal.

Moisan & Cloriatre, carriage makers,

East Farnham, have dissolved partnership.

The firm of Bastien & Poirier, wholesale leather and findings, Montreal, have registered.

The assets of the hardware and furniture business of L. A. Robitaille, Quebec, are to be sold on August 23.

A. Dallaire, general merchant, Tremblay, has assigned, and V. E. Paradis has been appointed provisional guardian.

The wholesale hardware firm of B. J. Coghlin & Co. have been registered at Montreal. The partners are B. J. Coghlin, B. H. P. Coghlin, and G. J. R. Coghlin.

## MANITOBA AND N.W.T.

John Fletcher, lumber dealer, Airdie, has sold out.

C. F. Peterson, hardware dealer, Gleichen, has sold out.

A. McLeod, blacksmith, MacLeod, has sold to S. McCrea.

Geo. Lucas, blacksmith, Bradwardine, is advertising his business for sale.

W. J. Wilcox, general merchant, Alameda, has sold out to Graham & Co.

Carter & Foster, blacksmiths, MacLeod, have been succeeded by Carter & McLeod.

W. S. Ahearn, electrical supplies, Winnipeg, has sold his business to Chas. Goodyear.

W. H. Moore, general merchant, Stephenfield, has sold out to D. B. Campbell.

J. A. Parke, agricultural implement

dealer, Churchbridge, has assigned to John Parks.

Mackenzie & Co., grocers and hardware dealers, Winnipeg, have sold out to J. R. Bardsley.

Mackenzie & Co., grocers and hardware dealers, Winnipeg, have sold out to J. R. Bradsley.

W. F. Lawrence, planing mill owner, Maple Creek, has sold his lumber business to A. A. Menelay.

The building firm of Addison & Davey, Calgary, have been succeeded by the Alberta Building Co., Limited.

## BRITISH COLUMBIA.

The Georgia Rock Co., Limited, Victoria, have been incorporated.

The Eva Gold Mines, Limited, Victoria, have been incorporated.

The Ross & Howard Iron Works Co., Limited, have been incorporated.

C. T. Diamond, general merchant, has assigned to A. C. Vars; meeting of creditors August 15.

Wright & McGregor, general merchants, Vancouver, have dissolved partnership, and the business will be continued by C. H. Wright.

## NOVA SCOTIA.

Wm. Curry & Son, planing mill, Windsor, have assigned.

L. M. Trask & Co., carriage dealers, Yarmouth, have dissolved partnership.

## PRINCE EDWARD ISLAND.

The business of Sterns, Sons & Co., general merchants, Souris, will hereafter be carried on by J. G. Sterns in his own name.



## CLASSIFIED LIST OF ADVERTISEMENTS

**Accountants and Auditors.**

Barber, Henry & Co., Toronto.  
 Babey, Wm., Toronto.  
 Boskins, David, Toronto.  
 Jenkins & Hardy, Toronto.  
 Kidd, F. H., Toronto.  
 Messon, Geo. O., Toronto.  
 Williamson, T. G., Toronto.

**Anvils**

Taylor Forbes Co., Guelph, Ont.

**Art Glass**

St. George, H. E., London, Ont.

**Ash Sifter**

Cutts, C. M., & Co., Toronto Junction.

**Axes Hatchets, Scythes, etc.**

American Axe and Tool Co., Montreal.  
 Dundas Axe Works, Dundas, Ont.  
 Warnock, James, & Co., Galt, Ont.

**Babbitt Metal.**

Canada Metal Co., Toronto.  
 Fairbanks Co., Montreal and Toronto.  
 Syracuse Smelting Works, Montreal.

**Barriers, Solicitors, etc.**

Atwater, Dudas & Chauvin, Montreal.  
 Bently, Blackstock, Fasken & Ruddell, Toronto.  
 Burritt, James H., K. C., Pembroke, Ont.  
 Cameron, D. O., Toronto.  
 Hamilton, J. C., Toronto.  
 Tupper, Phipps & Tupper, Winnipeg.  
 Vidal, I. L. O., Montmagny and Quebec.

**Belting, Hose, etc.**

Canadian Rubber Co., Montreal and Toronto.  
 Dominion Belting Co., Hamilton.  
 Gutta Percha and Rubber Mfg. Co., Toronto.  
 Pullman Mfg. Co., Rochester, N. Y.  
 Sadler & Haworth, Montreal and Toronto.

**Bird Cages.**

Wright, E. T., & Co., Hamilton.

**Brass Goods.**

Jones & Barclay, Birmingham.  
 Lewis, Rice, & Son, Toronto.  
 Morrison, Jas., Brass Mfg. Co., Toronto.  
 Nicklin, J., & Co., Birmingham, Eng.  
 Penberthy Injector Co., Windsor, Ont.  
 Taylor-Forbes Co., Guelph, Ont.

**Brushes and Brooms.**

United Factories, Toronto.

**Carpenters' and Builders' Tools and Supplies.**

Baynes, Chas., Blackburn, Eng.  
 Bliss, E. Mfg. Co., Pawtucket, R. I.  
 Covert Mfg. Co., West Troy, N. Y.  
 Fairbanks Co., Montreal and Toronto.  
 Howland, H. S. Sons & Co., Toronto.  
 Hyde, F., & Co., Montreal.  
 Ives, H. R. Co., Montreal.  
 Lamplough, F. W. & Co., Montreal.  
 Lewis Bros. & Co., Montreal.  
 Lewis, Rice, & Son, Toronto.  
 Lufkin Rule Co., Saginaw, Mich.  
 Merrick, Anderson & Co., Winnipeg.  
 Metal Shingle & Siding Co., Preston, Ont.  
 Metallic Roofing Co., Toronto.  
 Newman & Sons, Birmingham.  
 North Bros. Mfg. Co., Philadelphia, Pa.  
 Ontario Tack Co., Hamilton, Ont.  
 Ormsby, A. B., & Co., Toronto.  
 Pedlar People, Oshawa, Ont.  
 Phillips, Chas. D., Newburg, Eng.  
 Smith & Hemenway Co., New York.  
 Stanley Rule & Level Co., New Britain, Conn.  
 Taylor-Forbes Co., Guelph, Ont.  
 Wilcox Mfg. Co., London, Ont.

**Carriage and Waggon Accessories.**

Covert Mfg. Co., West Troy, N. Y.  
 Loucheud, J. S. & Co., Sarnia, Ont.  
 Steele, James, Guelph, Ont.

**Cattle and Trace Chains.**

Greening, B., Wire Co., Hamilton.  
 Oneida Community Co., Niagara Falls.

**Churns.**

Maxwell, David, & Sons, St. Marys.

**Clippers—All Kinds.**

American Shearer Mfg. Co., Nashua, N. H.  
 Burman & Sons, Birmingham, Eng.

**Cordage.**

Brantford Cordage Co., Brantford.  
 Canadian Cordage and Mfg. Co., Peterborough, Ont.  
 Consumers Cordage Co., Montreal.  
 Hamilton Cotton Co., Hamilton.

**Cork Screws.**

Erie Specialty Co., Erie, Pa.

**Corundum.**

Canada Corundum Co., Toronto.  
 Saxony Union, Frankfurt-on-Main, Germany.

**Cutlery—Razors, Scissors, etc.**

Birkett, Thos., & Son Co., Ottawa.  
 Butler, Geo., & Co., Sheffield, Eng.  
 Charles Shear Co., Toronto.  
 Docken Bros. & Co., Montreal.  
 Heimsch, R. Sons Co., Newark, N. J.  
 Lamplough, F. W. & Co., Montreal.  
 Silberman, A. L., New York.  
 Smith & Hemenway Co., New York.  
 Walter, E. F., & Co., Montreal.  
 Wiebusch & Hilger, New York.

**Educational.**

Belleville Business College, Belleville.  
 Canadian Coll. College, Toronto.  
 Metropolitan Business College, Ottawa.  
 St. Margaret's College, Toronto.  
 Western Business College, Toronto.

**Electric Fixtures.**

Morrison James, Mfg. Co., Toronto.  
 Munderloh & Co., Montreal.  
 Sayer Electric Co., Montreal.

**Engravers**

Logg Bros., Toronto.  
 Smith, Geo. J., New York.

**Files and Rasps.**

Barnett Co., G. & H., Philadelphia, Pa.  
 Disston, Henry & Sons, Philadelphia, Pa.  
 Grose, Walter, Montreal.

**Financial Institutions.**

Bradstreet Co.  
 British America Assurance Co., Toronto.  
 Canadian Bank of Commerce, Toronto.  
 Confederation Life Ass., Toronto.  
 Liverpool & London & Globe Ins. Co., Toronto.  
 London Guarantee and Accident Ins. Co., Toronto.  
 Metropolitan Bank, Toronto.  
 Western Assurance Co., Toronto.

**Firearms and Ammunition.**

Hamilton Powder Co.  
 Hamilton Rifle Co., Plymouth, Mich.  
 Harrington & Richardson Arms Co., Worcester, Mass.  
 Iver Johnson's Arms and Cycle Works, Fitchburg, Mass.  
 Remington Arms Co., Ilion, N. Y.  
 Union Metallic Cartridge Co., Bridgeport, Conn.  
 Walter, E. F., & Co., Montreal.

**Flat Irons.**

Ives, H. R., Co., Montreal.

**Food Choppers**

Enterprise Mfg. Co., Philadelphia, Pa.  
 Lamplough, F. W. & Co., Montreal.  
 Russell & Erwin Mfg. Co., New Britain, Conn.  
 Smith & Hemenway Co., New York.

**Furnace Cement.**

Sterne, G. F., & Son, Brantford, Ont.

**Gas Lamps and Sundries.**

Auer Light Co., Montreal.  
 International Gas Appliance Co., Toronto.

**Glaziers' Diamonds.**

Sharratt & Newth, London, Eng.  
 Shaw, A., & Son, London, Eng.

**Glue.**

Grove Chemical Co., Lancashire, Eng.

**Hardware Specialties.**

Erie Specialty Co., Erie, Pa.

**Horseshoe Pads.**

Canadian Rubber Co., Montreal.

**Horseshoes and Nails.**

Canada Horse Nail Co., Montreal.

**Ice Cutting Tools.**

Erie Specialty Co., Erie, Pa.  
 North Bros. Mfg. Co., Philadelphia, Pa.

**Injectors—Automatic.**

Penberthy Injector Co., Windsor, Ont.

**Iron Pine.**

Page-Horsey Iron and Tube Co., Guelph.

**Iron Pumps**

McDougall, R. Co., Galt, Ont.

**Keys.**

Millen, John & Son, Montreal.

**Lanterns.**

Ontario Lantern Co., Hamilton, Ont.  
 Wright, E. T., & Co., Hamilton.

**Lawn Mowers.**

Bowman, John, Hardware and Coal Co., London, Ont.  
 Maxwell David & Sons, St. Marys, Ont.  
 Taylor Forbes Co., Guelph, Ont.

**Ledgers and Office Stationery.**

Briggs Ledger System Co., Toronto.

**Lumbermen's Supplies.**

Birkett, Thos., & Son Co., Ottawa.

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Canada Foundry Co., Toronto.  
 Fairbanks Co., Montreal and Toronto.  
 Gros Brass Works, Detroit.  
 Jarling, A. B., & Co., Hespeler, Ont.  
 Kerr Engine Co., Walkerville, Ont.  
 Morrow Machine Screw Co., Ingersoll, Ont.  
 Ontario Wind Engine and Pump Co., Toronto.  
 Penberthy Injector Co., Windsor.

**Mantels.**

Batty Stove and Hardware Co., Toronto.

**Manufacturers' Agents.**

Gibb, Alexander, Montreal.  
 Philip, David, Winnipeg.

**Metals.**

Booth Copper Co., Toronto.  
 Canada Iron Furnace Co., Midland, Ont.  
 Canada Metal Co., Toronto.  
 Deseronto Iron Co., Deseronto, Ont.  
 Gibb, Alexander, Montreal.  
 Gilbertson, W., Pontypridd, Wales.  
 Hankin, F., Montreal.  
 Ironside, Son & Co., London, Eng.  
 Jackson, C. F., & Co., Vancouver, B. C.  
 Kemp Mfg. Co., Toronto.  
 Leslie, A. C., & Co., Montreal.  
 London Rolling Mills Co., London, Ont.  
 Lysaght, John, Bristol, Eng.  
 Morton, B. K., & Co., Sheffield, Eng.  
 Nova Scotia Steel and Coal Co., New Glasgow, N. S.  
 Rogers, Henry, Sons & Co., Montreal.  
 Samuel, Benjamin & Co., Toronto.  
 Thompson, B. & S. H. & Co., Montreal.

**Metal Lath.**

Metallic Roofing Co., Toronto.  
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**Milk Cans and Trimmings.**

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 Kemp Mfg. Co., Toronto.  
 McClary Mfg. Co., London, Ont.

**Miniature Tools.**

Davidson Mfg. Co., Brooklyn, N. Y.

**Office Furniture.**

Office Specialty Mfg. Co., Toronto.

**Paints, Oils and Glass.**

Berry Bros., Detroit and Wallaceburg.  
 Canada Paint Co., Montreal.  
 Canadian Oil Co., Toronto.  
 Consolidated Plate Glass Co., Toronto.  
 Dods, F. D., & Co., Montreal.  
 Henderson & Potts, Montreal and Halifax.  
 Imperial Varnish and Color Co., Toronto.  
 J. W. L., Box 1147, Montreal.  
 Jamieson, R. C., & Co., Montreal.  
 Lucas, John, & Co., Philadelphia, Pa.  
 Luxfer Prism Co., Toronto.  
 McArthur, Corneille & Co., Montreal.  
 McCaskill, Dougall & Co., Montreal.  
 Merrick, Anderson & Co., Winnipeg.  
 Nobles & Hoare, London, Eng.  
 Queen City Oil Co., Toronto.  
 Ramsay & Son, Montreal.  
 Sherwin-Williams Co., Montreal.  
 Thorne, R. E., Montreal.  
 Winnipeg Paint & Glass Co., Winnipeg.

**Patent Solicitor.**

Cullen, Orlan Clyde, Washington, D. C.

**Perforated Sheet Metals.**

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**Plumbers' Supplies.**

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 Millen, John, & Sons, Montreal.  
 Morrison, Jas., Brass Mfg. Co., Toronto.  
 Page-Horsey Iron and Tube Co., Guelph.

**Portland Cement.**

Hanover Portland Cement Co., Hanover, Ont.  
 Hyde, F., & Co., Montreal.  
 Thompson, B. & S. H. & Co., Montreal.

**Refrigerators.**

Davidson, Thos., Mfg. Co., Montreal.

**Registers.**

Ferguson Co., Bridgeburg, Ont., and Cleveland, Ohio.

**Roofing Supplies.**

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 Jenkin, A. C., Montreal.  
 McArthur, Alex., & Co., Montreal.  
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**Steel Rails.**

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Colonial Stock Food Co., Toronto.  
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 Grose, Walter, Montreal.  
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 Fairgrieve Mfg. Co., Toronto.  
 Guelph Foundry Co., Guelph.  
 Gurney Foundry Co., Toronto.  
 Kemp Mfg. Co., Toronto.  
 Ives, H. R. Co., Montreal.  
 McClary Mfg. Co., London.  
 Merrick, Anderson & Co., Winnipeg.  
 Sterne, G. F., & Son, Brantford, Ont.  
 Telephone City Stoves, Brantford.  
 Western Foundry Co., Wingham.  
 Wright, E. T., & Co., Hamilton.

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 Canada Hardware Co., Montreal.  
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 Lewis Bros. & Co., Montreal.  
 Lewis, Rice, & Son, Toronto.  
 Merrick, Anderson & Co., Winnipeg.

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 Dennis Wire and Iron Co., London, Ont.  
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 Greening, B., Wire Co., Hamilton.  
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 McGregor & Banwell Fence Co., Windsor, Ont.  
 Merrick, Anderson & Co., Wingham.  
 Oneida Community Co., Niagara Falls.  
 Owen Sound Wire Fence Co., Owen Sound.  
 Page Wire Fence Co., Waukegan, Ill.  
 Walter, E. F., & Co., Montreal.  
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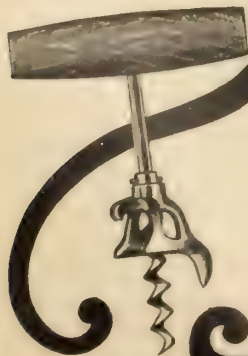
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## AND CANADIAN MACHINIST

A Weekly Newspaper devoted to the Hardware, Metal, Machinery, Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, AUGUST 27, 1904.

NO. 35

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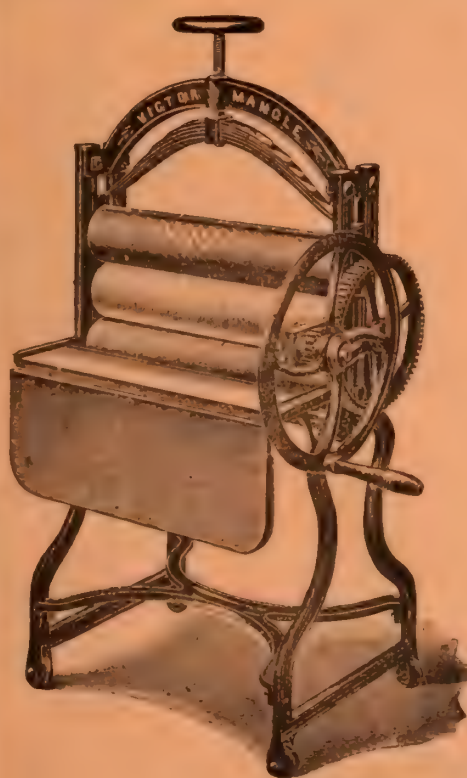
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Page 1  
and



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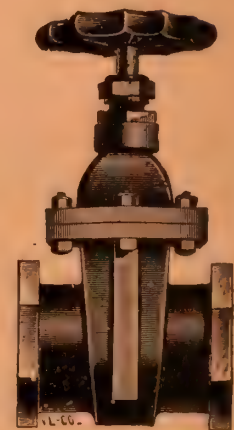
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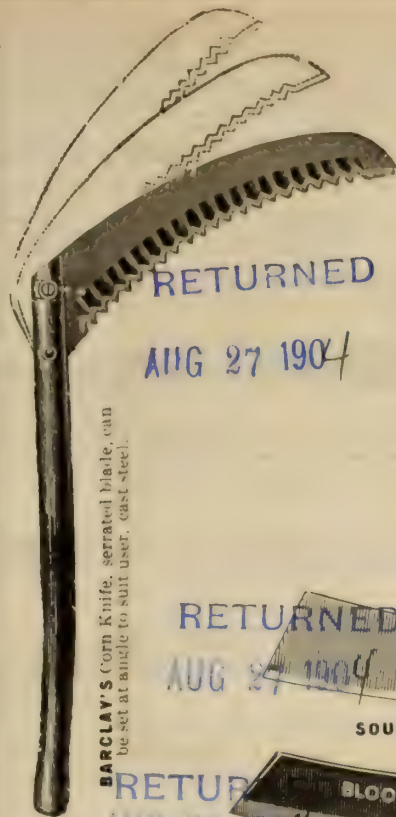
Shipment from Stock  
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## M. & L. Samuel, Benjamin & Co.

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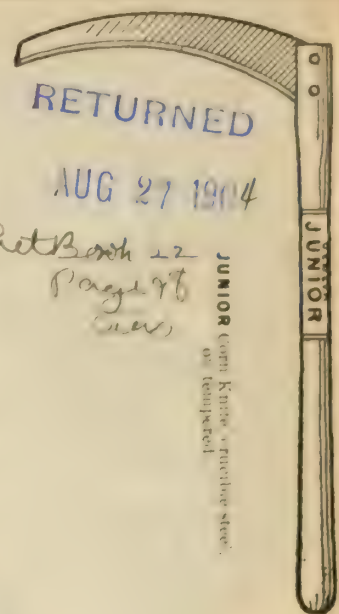
English House—16 Philpot Lane, LONDON, ENGLAND.





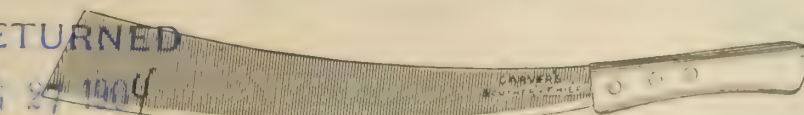
BARCLAY'S Corn Knife, serrated blade, can be set at angle to suit user, cast steel.

**W**HEN the jobbing of hardware commenced in Canada the conditions surrounding each business were very much the same. Soon it was found that it took more than travelers to bring business. We rely on Low Prices and Prompt Service to win trade, and on honest, courteous treatment to retain it.



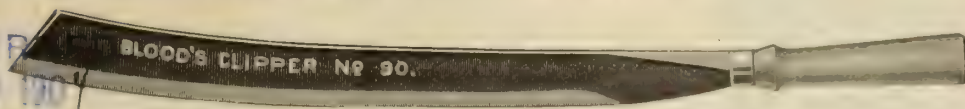
JUNIOR Corn Knife, structure steel, or tempered.

RETURNED  
AUG 27 1904



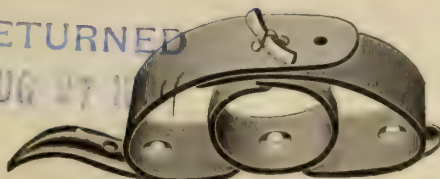
SOUTHERN CHIEF Corn Knife, highly tempered, both sides ground.

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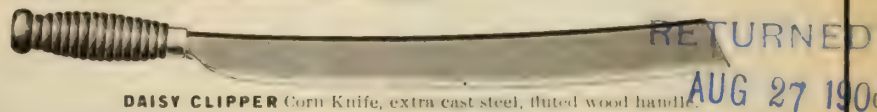


BLOOD'S CLIPPER Corn Knife, cast steel, bronzed, wood handle.

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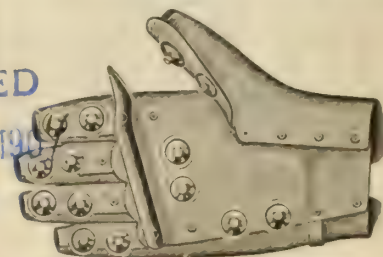


No. 0065—Husking Pin, mule skin cot.  
No. 0060 — " " without "



DAISY CLIPPER Corn Knife, extra cast steel, fluted wood handle.

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No. X44—Corn Husker, mule skin, steel discs.

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FRONT.

BLACK HAWK Corn Sheller, malleable iron, chilled bearings, easily adjusted, deposits the shelled corn in one box and cobs in another.



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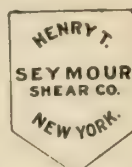
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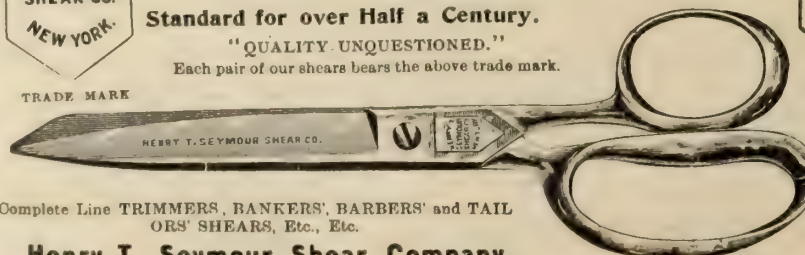
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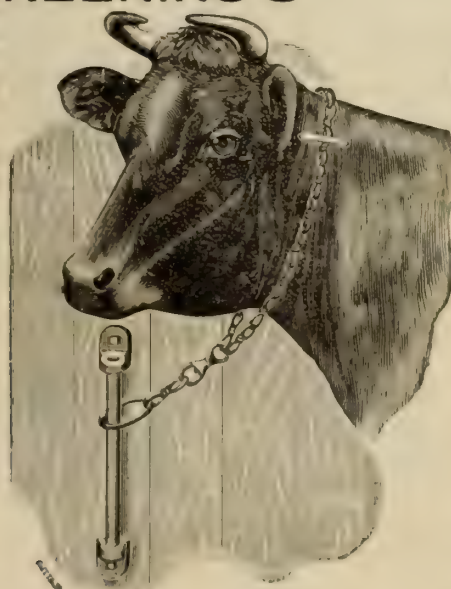
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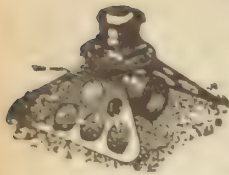
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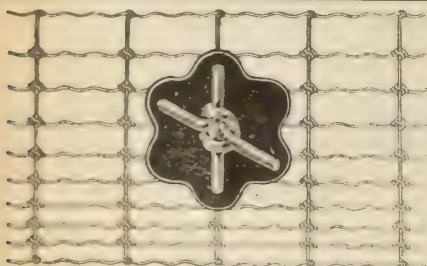
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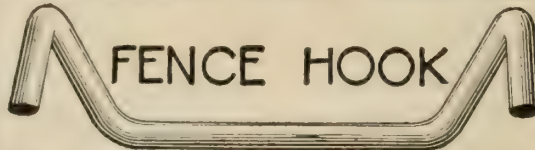
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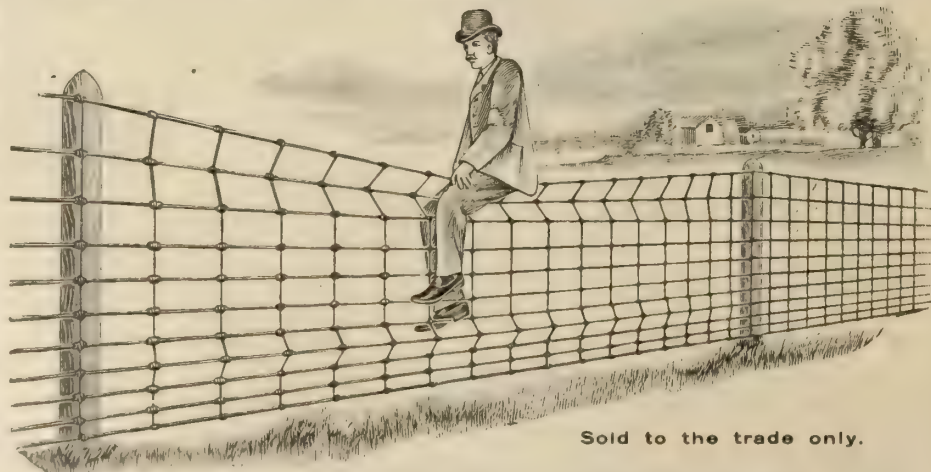
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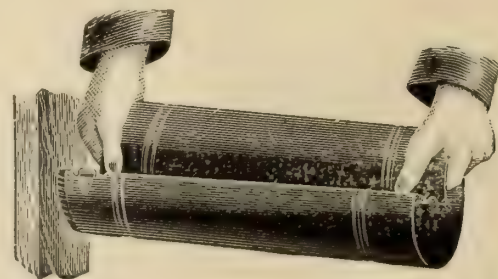
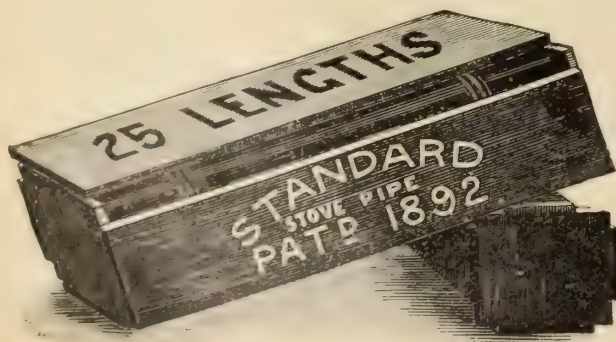
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# COMMERCIAL TRAVELING IN CANADA

By Mr. P. B. Ball, Canadian Commercial Agent at Birmingham, Eng.

**I**N Hardware and Metal of Aug. 20 was published a special article from the Birmingham Daily Post on "Commercial Traveling in Canada," written by an English traveler who had just returned to the Motherland from a business trip to Canada. We have pleasure in reproducing in this week's issue an answer to the above article contributed to the Birmingham Daily Post by Mr. P. B. Ball, Canadian commercial agent in Birmingham, Eng.

It was not my first intention to answer your specially contributed article on "Commercial Traveling in Canada," published in your issue of the 9th, but I have had a number of letters from people asking if the conditions as stated in the article are actually so. One gentleman writes me in a most cheerful mood, and asks me what I think of the loyalty of the Canadians now after reading the article. He further states that he intends sending the paper to the Liberal candidate at Oswestry. This letter is distinctly funny.

I am also favored with letters from some large business houses who intended attempting to do business, but who are rather doubtful after reading of the complete Americanization of Canada. I have one from one of the largest firearm manufacturers, and whose house is a household word with us among those who wish to use the highest class of guns, revolvers, and rifles, but a firm which has never had a direct representative and whose name never appears in a paper so that the average Canadian might find out that such a firm exists. If we do get a chance to buy anything from this celebrated firm, we either have to come over and buy it or pay about four profits between their list and the purchaser.

The writer of your article has my most sincere sympathy. I extremely regret that his visit to Canada was so unfruitful, but I think his failure, at any rate partially, is due to himself. He went out as he states as "an old hand on the road" with an experienced gained by traveling through Great Britain and the Continent, but evidently knowing nothing of matters as they obtain in Canada. As being an old hand he did not think it worth while making enquiries which might have saved him

both time and trouble. I do not know the nature of his business, but it seems to be something in the household furnishing line. The patriotism of Canada did not impress him strongly, and he regretted that it stopped short at the pocket. No doubt he thought he would be able to sell his "improved frying pans" amidst the waving of the Union Jack, and the singing or playing of the National Anthem. Canadians do not associate business with loyalty to that extent.

## The Preference.

Canada merely gives Great Britain a preference of one-third of the amount of duty, and, as the gentleman observes, "all things being equal the British manufacturer has the preference." What more can any fair business man want? His remarks on some subjects remind me of the ideas held by the average manufacturer in Great Britain 25 to 30 years ago. He believed that anything that sold in Great Britain or any Continental country was quite good enough for Canada. That idea I am glad to say has been obliterated from the minds of a large number of your manufacturers. It has been my privilege to have been in rather close touch with the British manufacturer and merchant since 1876, and I can speak feelingly on the change which has come over many of them. They will give us an opportunity of buying what we want. He is willing to go out and fight for his market, but that does not seem to suit some travelers.

The writer of the article sneers at our modest little 10 per cent. preference. He evidently expected that he would get 33 1-3. How high did he think our tariff was? It strikes me that if it had not been a British colony but had been Germany that gave this 10 per cent., he would not have belittled it quite so much. He partially states the truth of his failure when he says that he had to meet the keen competition of the Americans, and in many instances their "cleverer patents" and "handier notions." That covers a great deal. Moreover, he does not credit us with originating any ideas. All is done by the "Yankee." (He forgets the telephone.) He allows that the Britisher's indifference has lost him a large quantity of our trade. What did he think we were going to do? Sit

and suck our thumbs, or take what was given us? No, we bought the best goods the American, Frenchman, and German could produce, as well as a large quantity of British goods (but not the amount that we should had we been properly looked after). We also took what we considered the best ideas for ourselves in certain goods, and manufactured them.

## Americanization of Canada.

The gentleman evidently was not conversant with a great many matters as they obtain on the other side of the water. He complains that we have adopted American ideas in the systems of railways, hotels, sanitation, lighting, street traffic, plumber's fittings, heating apparatus, etc. This may be so, but unfortunately you have not educated us to a sufficient degree. But, from my own experience, I may state that so long as the world lasts you never would get the Canadians to take up some of the articles used by yourselves. The heating and cooking utensils as used in this country, and also your ranges, would certainly not suit us. You burn soft coal; we burn anthracite. I do not suppose that in fifty households in Canada you would find a cast-iron pot such as is used in almost every house in Great Britain, or, if found in more, it would probably be an heirloom.

We once used British enamelled ware, but you were beaten out of the market, and we had to go elsewhere, Germany. We would gladly return to England if possible, but all you do in the matter is to manufacture the basis, send them to Germany to be enamelled and then brought back. So far as heating apparatus is concerned, no one in Canada could live with the heating appliances you have in your houses here. We are very much in advance of you with regard to plumbers' supplies. You make beautiful goods, but we do not see the sense of putting a ton of metal in an article when half a ton will do. It is the idea in the minds of some that we want flashy, flimsy goods.

The gentleman is very much disappointed because we use "dogcarts" instead of "dogcarts." Well, if he had to rid ten miles over one of our country



roads in a "dogcart" there would not be very much left of him.

In men's hats and hosiery we import no more from the States than we do from you, and so far as footwear is concerned he does not seem to understand that a man requires a pair of waterproof boots here, while in our Summer he will wear a fine calfskin boot, and in the Winter he protects his feet with what you call a "golosh." But the gentleman should not complain of that, for I see even England has adopted American boots, and American boot shops appear in all your large cities.

Referring to the close proximity of the United States to Canada, and giving that as one reason against the selling of British goods, he, like many more, seems to think that there is only an imaginary line between the States and Canada, on the one side of which an American porter stands and hoists the packages across at no expense. For this gentleman's information I may say that it costs as much to send a ton of stuff from Pittsburg to Toronto as it does from Liverpool to Toronto.

#### **Limited Companies.**

I take exception to the statement that the majority of houses are in the hands of limited companies. Seven out of ten jobbers and dealers are private firms, and a large proportion of the balance are managed by one family, who have all their money invested in it, although it is called a limited company. Probably not more than 50 per cent. of our manufacturers are in private hands, but I do not think this is very different from things in Great Britain. He objects to having a buyer for every department. I do not think this idea is confined to Canada alone. I fancy Great Britain does a great deal in that way, and it seems to me to be indicative of good sense. If the gentleman went to sell goods to Whiteley, of London, I do not suppose he would expect Mr. Whiteley himself to buy them.

Of course it is a very serious thing that so many young men should have been appointed to responsible positions, but I fancy the gentleman himself must have had a very severe turning down by one of these twenty-five-year-old Canadians which makes him speak in the way he does of them. If he was spoken to about the slowness of the British it was probably an allusion to the length of time it would take him to fill an order. In many cases if we were doing all our buying from Great Britain we would have to stock for more than eighteen months.

It was one of those unfortunate things in life that this gentleman could not get the principals of houses to drop everything and attend to him. No doubt

business men here drop everything at once and attend to the traveler. From my knowledge of trade matters on this side it is only at certain hours that a traveler can see a buyer, and he seems to have found our people accessible at all times.

I think the visit to Canada has probably done the gentleman good, and he will probably go out again and do a good business. I can quite see why he could not sell more goods when an advantage of 10 per cent. looks so small. A good many houses I fancy would be rather glad to work for that much gross profit. Some of his wonderful ideas have been exploded, and he finds after all that the word "British" is not in itself enough to sell goods. If the manufacturer goes out to Canada with the idea that his goods are the only goods in the world he will be mistaken, but if he goes with the idea, as your correspondent says, "that he will get a good reception and be well treated," and shows an article that the Canadians want, and not insist too much that what he has to sell is what we must have, but will make what we want, then there is no doubt that he will do business.

#### **Traveling in Canada.**

With regard to expensive traveling. So far as the duties are concerned, and his complaint that paying duty on his packages was blackmail, all travelers have to pay this duty, no matter from what country they come. Had he been willing to take a little advice he would have gone to Canada with the invoice of samples and packages, and he probably might have paid a little less. It was annoying no doubt, but not more so than it is to a Canadian who visits Great Britain and is charged 4s on a broken pound package of tobacco. They are both Government rules, and there is no getting away from them. Railway fares are cheaper there than here. From Montreal to Toronto is 666 miles return, and the fare (first-class), including Pullman sleeping car, amounts to £4; but had he taken a little advice from those who knew he would have joined the Commercial Travelers' Association, and got his fare about one-third less, and would have been allowed about 200 lbs. excess baggage. The fare from Birmingham to Glasgow, 576 miles return, is £4 10s; and if you took a "Pullman" you would want your pocket-book full.

We have not outside porters as here. We cannot get the men, but we have something which may cost a little more with our transfer companies. He objects to fivepence for a shine—he should have said that he got a polish which would last him for a week, not the dab-

bing on of a bit of blacking such as you usually get at hotels on this side. If he got a polish in a London hotel of the same class as he got in Canada it would cost him sixpence. Hotels of the class he used in Montreal, Quebec, and Toronto could not be found in this country for twice the money. A man may go through a bill of fare in Canada and get his choice of three times as much as he would get at one meal here for the same price. Everything is table d'hôte, and a bill of fare for three meals is put before a traveler which could not be got for three times the money in Great Britain. It is an exaggeration to say that you can get as much for a shilling in England as you can get for a dollar in Canada. Little expenses may amount to more, but the larger ones are not so much. Of course, if he is going across the Continent he is traveling ten times the length of the British Isles. If he goes from Montreal to Toronto he goes farther than from London to Glasgow, and probably if a man is accustomed to take two weeks to travel that distance on this side it naturally would amount to less. The shorter trips give him a chance to average his expenses.

In spite of the gentleman's remarks, there is a large business to be done if the British will go after it, and make what we want, but it is absolutely useless for a man to go to the other side thinking he can sell any "old thing" just because it is "British."

#### **PERSONAL MENTION.**

Mr. E. B. Kelly, of the Penberthy Injector Co., of Windsor, Ont., spent a few days this week in Montreal. Mr. Kelly stated that he finds Hardware and Metal read and appreciated in all the leading establishments connected with the trade throughout the country.

Mr. T. H. Newman, of Caverhill, Learmont & Co., Montreal, has just returned from a holiday spent at Rothsay, N.B.

The marriage of Mr. Alex. J. Clark, traveler for the McClary Mfg. Co., London, and Miss Charlotte Cooper, of London, was celebrated recently.

#### **TO MANUFACTURE AUTOS.**

The Ford Motor Co., capital \$125,000, are applying for incorporation under the laws of Ontario and having obtained a charter they will at once commence the manufacture of their "Ford" machines in Walkerville, Ont., in the building formerly occupied by the Milner-Walker Wagon Co., which has been removed to West Lorne, Ont.



## TECHNICAL BOOK REVIEWS.

**Air Brake Catechism.**—A complete study of the Westinghouse air brake equipment in the form of a catechism, by R. H. Blackall; over 1,500 questions and answers; 312 pages 7 x 5 inches, containing 12 charts,



three of which are in colors, and numerous illustrations; 18th edition, published by Norman W. Henley & Co., New York. Sold by the Book Department of Hardware and Metal, Toronto, \$2. This work is a complete study of the air brake and signal equipment, including the very latest devices. The operation of all parts is explained in detail, and a practical way of finding the peculiarities and defects with their proper remedy are given. This work would be of great use to practical railroad men and to all who wish to get a good idea of the workings of the up-to-date air brake system. It is written in a remarkably clear and easily understood style.

**Modern Machine Shop Tools.**—An entirely new work treating the subject of modern machine shop tools, their construction, operation and manipulation, in a concise and comprehensive manner, by Wm. H. Vandervoort, M. E.; 555 pages, 9x6 inches; 673 engravings, cloth binding; published by Norman W. Henley & Co., New York, and sold by the Book Department of Hardware and Metal, Toronto, \$1. This work is logically arranged, the various hand and machine tools being grouped into classes, and a description of each is given in proportion to their relative importance. The illustrations represent the latest tools and methods, all of which are clearly described. Each tool is considered from the following points: First, its construction, with hints as to its manufacture; second, its operation, proper manipulation and care; third, numerous examples of work performed. This book is the outgrowth of a series of articles prepared by the author for the students in machine shop practice at the University of Illinois. An effort has been made to treat the subject in a clear and comprehensive manner, carefully avoiding all un-



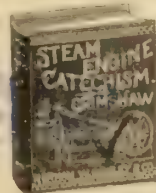
necessary matter, and presenting to the apprentice and mechanic many points pertaining to the tools with which they come in daily contact and about which they are often unable to obtain all the information necessary in order that they may use these tools correctly and efficiently.

**Shop Kinks.**—A book entirely different from any other on machine shop practice, showing special ways of doing work better, more cheaply and more rapidly than usual, as done in fifty or more leading shops in America; by Robert Grimshaw, M. E.; fourth edition; 393 pages, 8 x 5 1/2 inches; 222 illustrations; cloth binding; published by Norman W. Henley & Co., New York. Sold by the Book Department of Hardware and Metal Toronto, \$2.50.



This is a work that it would pay every merchant to study, since it is made up of "kinks" and "wrinkles" of doing work in the best way gathered from the author's own experience, from the experience of others as made public in technical journals, and from visits made by the author to many of the largest and most up-to-date machine tool manufacturing plants, such as the Baldwin Locomotive Works, the Bement & Miles Co., the Brown & Sharpe Mfg. Co., the Cleveland Twist Drill Co., and many others in the United States. Such a work is sure to contain much information that the most expert and experienced machinist would find new and of value.

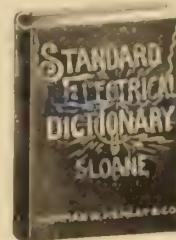
**The Steam Engine Catechism.**—A volume of direct practical answers to direct practical questions; by Robert Grimshaw, M. E.; fourteenth edition; 413 pages, 6 x 4 1/2 inches; fully illustrated; cloth binding; published by Norman W. Henley & Co., New York. Sold by Book Department of Hardware and Metal, Toronto, \$2. This is a handy volume for anyone interested in steam engineering, intended, however, for young engineers. It is not only a catechism on the question and answer principle, but it contains formulas and worked out answers for all the steam problems that appertain to the operation and management of the steam engine. Illustrations of valves and valve gears with principles of operation are given. Thirty-four tables, very valuable to every engineer who wishes to be progressive



and who wishes to become master of his calling, are contained within its pages. It is fully indexed.

**The Standard Electrical Dictionary.**

A popular hand-book of reference, containing definitions of about five thousand distinct words, terms and phrases used in the practice of electrical engineering; by T. O'Connor Sloane, A.M., E.M., Ph.D.; 682 pages, 7 1/4 x 5 inches; 393 illustrations; cloth binding; published by Norman W. Henley & Co., New York; sold by the Book Department of Hardware and Metal, Toronto, \$3.00. This is the third edition of a concise and practical book of reference, revised and enlarged by an appendix, bringing the work up to the present time. It is a book which will be found of immense value to all interested in the science of electricity, whether professional or non-professional. Students in electrical engineering and also electrical engineers will find it a valuable addition to their library. It is also suited to the practical electricians' needs. The work is alphabetically indexed.



## HARDWARE AND HEROISM.

"WHEN I was a small boy and attended the district school," said the old hardwareman, as he leaned back in his chair in a meditative manner, "I learned with much labor and inward fear those old familiar lines of Longfellow:

'In the world's broad field of battle,

In the bivouac of life,

Be not like dumb, driven cattle,

Be a hero in the strife.'

"My father was present at the school performance and was very much pleased with my method of recitation, and, knowing his character and disposition, I felt that the sentiment expressed was one that appealed to him strongly.

"After leaving school I found employment in the hardware store of our village, and I can assure you that in the beginning the little sum of money that was put into my hand each Saturday night by the proprietor had more to do with keeping me busy and interested than any high and honorable ambition, or any set purpose of getting along in the world.

"I very well remember on one occasion going home at the end of the week, quite tired out and discouraged, and say-



ing to my father: 'I think I will give this job up as there is too much work in it to suit me and not enough fun by any means.' My father looked at me for a few minutes and then said: 'Henry, do you recall those verses which you recited at the close of school, where it says something about not being a dumb, driven cow or horse, and being a hero in the strife?' 'Yes, sir,' I responded. 'I do.' 'Well, Henry,' said the old gentleman, as he laid his hand upon my shoulder, 'did it ever strike you what Longfellow meant in writing those verses?' 'Of course I do,' I answered, 'he meant soldiers, and men who go out in war to fight the enemies of their country; to kill as many fellows as they can on the other side, and to get all the glory and honor out of it they could.'

"My father responded, 'Yes, Henry, he no doubt referred to men who have fought and died for the glory and defence of their country and in honor of their flag. But, my son, he meant a great deal more than that. He meant that every little boy who works six days in a week in a hardware store for \$3, can be just as much of a hero as any general ever pretended to be. He meant, my son, that a real hero is one who sees his labor and his duty laid out before him and who buckles down with all the strength there is in him and does the best he can. Now, my son, I want you to go back on Monday morning to your work and every time you feel like being discouraged or dissatisfied, think that the work is a little too hard for you, just say to yourself, "I am a hero, not fighting the battles of my country, but fighting my way through the world making the best I can out of everything that comes to me, doing my full share of work, and putting myself in a position where in a few years I can look back to these days with the remembrance that in all things I did the best I knew how." Now, my son, think this over and in a few years you will tell me that I was right and that you were glad that we had this little talk.'

"My father was laid away to rest a great many years ago," continued the old gentleman, "but many a time before the end came I had occasion to thank him for his good advice. He gave me a new outlook on life, and made my business seem a different thing than it had ever seemed before. I have not been much of a hero so far as worldly expectations go, but I do feel that I have

lived an honest, industrious, and honorable life and have done the very best I know how."—Hardware Dealers' Magazine.

#### WHICH METHOD WILL WIN OUT?

THE HUSTLER" in The Stoves and Hardware Reporter reports two conversations and asks a question, which all young men should answer to themselves after serious thought:

Young Hardware Clerk—No, I am not stingy; no one ever accused me of being, but I am anxious to save and get in business for myself. Over a year ago I read of the benefits of a fruit and nut diet. Without thinking of saving I made up my mind to try it for noon lunches. I had been accustomed to eating a conglomeration of roast meats, vegetables and occasionally a glass or a bottle of beer to wash it down. My stomach never did feel just exactly right after it. I started in on the fruit, nuts and raisin diet, and found after a little that I not only felt a great deal better but was so much money ahead, I began to figure the cost and save the difference. As a result I am greatly improved in health. I saved eighty dollars the first year and it's now drawing interest with the rest of my savings in bank. I tell you it's a great scheme for both health and pocketbook.

Second Young Man, at Union Station Ticket Office—I was fifteen thousand dollars ahead of the races last week. Of course I kept at it too long, but I'm still four thousand to the good, and it will do something.

Query for the guessing class: Which young man will in all probability be worth the more money ten or fifteen years hence, and stand the highest in public esteem? Don't all answer at once.

#### ENLARGING PLANT.

The town of Meaford, Ont., has passed a by-law granting a loan of \$20,000 to the Meaford Wheelbarrow Co. for the purpose of enlarging and extending their plant there.

#### TRADE NOTES.

Alexander Gibb, 13 St. John street, Montreal, has made arrangements to represent the Clyde Cutlery Co., Clyde, Ohio, for the sale of their Improved Draw Cut Pruning Shears, etc. The Clyde Cutlery Co. are also makers of butcher knives and all their goods are warranted unconditionally.

#### CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

##### Hamilton Corliss Engine.

THE Hooven, Owens, Reuschler Co., Hamilton, O., are issuing a beautiful catalogue, 12x9 inches, illustrating and describing their Corliss vertical engine. The cover is very handsomely embossed with an attractive design and the catalogue name and the name of the firm. The illustrations and typographical execution are worthy of the class of engines manufactured by this firm. On the first page is given a birds-eye-view of the plant, which within the last few years has been entirely reconstructed. On pages 3 and 5 are given views of the completed engine, followed by page illustrations of the high pressure cylinder, the low pressure cylinder, the steam valve gear and dash pots, the exhaust valve gear, piston and crosshead, connecting rod, line drawing of the end view of the engine, line drawing showing sectional view through high pressure side and line drawing showing front view.

##### The Homestead Valves.

The Homestead Valve Manufacturing Co., Pittsburg, Pa., in a little booklet illustrates and describes the Homestead valves and locking cock. This booklet contains price lists that supersede former ones. The straight-way valve, the three-way valve, the four-way valve, the locomotive blow-off, the Junior valve, the locking cock and angle valve are all illustrated and described.

##### Patent Glue Heater.

The Grove Chemical Co., Limited, manufacturers of glues, gelatine, etc., Appley Bridge, Lancashire, Eng., are sending out a booklet, 8x3½ inches, describing and illustrating a patent glue heater they are putting on the English

## WIRE NAILS TACKS WIRE

Prompt Shipment

**The ONTARIO TACK CO.**

Limited

HAMILTON, ONT.



market. The Wetmore Heater, as it is called, consists of an air-tight heating chamber, surrounded entirely by a water or steam jacket or chamber, manufactured entirely of copper, the only metal which heated glue does not have a detrimental effect on. Because of the air-tight glue chamber dust and dirt cannot reach the glue, nor can any odor escape to the room. The glue is drawn from the gate, as wanted. The heater is supplied with a patent agitator to stir the glue.

#### Steam and Power Pumps.

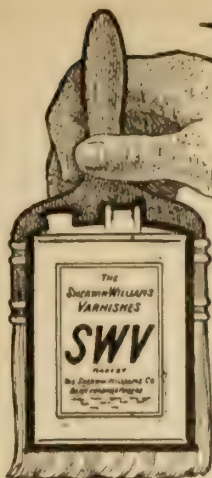
The Springfield Elevator and Pump Co., manufacturers of steam and power pumping machinery, independent, condensing apparatus, automatic receivers, and passenger and freight elevators, Springfield, Mass., have issued their 1904 catalogue, giving illustrations, descriptions and specifications of their different products. Special attention is drawn to the simplicity of the duplex steam pumps turned out by this firm. All pumps are fitted with packed water pistons, and the packing can be changed in a few minutes when it becomes worn.

#### Treasure Stoves and Ranges.

The 1904-05 catalogue of the D. Moore Co., Limited, Hamilton, is an exceedingly fine edition of a stove catalogue. It is 11 x 8½ inches and contains 108 pages. This firm are ever in the front with new and up-to-date designs in the stove and range line as can be seen from their catalogue. This catalogue, No. 56, contains a full description of their entire line, and is splendidly illustrated by fine engravings taken from photographs of the goods. Their line is complete from the largest size of cooking range down to the smallest campers' folding cook stove. This catalogue will be furnished to any reader of **HARDWARE AND METAL**, and the company are always glad to furnish further information regarding any stove in the catalogue.

#### Sargent Gas Engine.

The Wellman-Seaver-Morgan Co., Cleveland, O., are sending out a catalogue illustrating and describing the Sargent Complete Expansion Gas Engine, the exclusive right to manufacture and sell which this company have secured. This gas engine is a double-action tandem engine, and the first and only one to expand the burning charge to practically atmospheric pressure, to vary the point of cut off of the admission inlet with the load, and to advance the time of ignition



## A Varnish Talk to S.W.P. Agents

A Few Words  
About the Big  
Advertising on  
**SHERWIN-WILLIAMS  
VARNISHES**



We purpose putting more thought, more force, and more money into advertising *Sherwin-Williams Varnishes* than ever before. Their uniform good quality, the satisfaction they are giving, the splendid market they have found in the short period of five years, make them deserving of the widest and best advertising and the strongest selling organization.

We have just started the initial work of the campaign. Strong, business-getting advertising is now being mailed direct to the painters, architects, contractors, householders, and other varnish consumers in the Dominion. We will steadily continue this special advertising, increasing our appropriation from time to time. We will never let up in our efforts until S.W.V. is as well known as S.W.P.

If you are handling S.W.V. make sure your stock is big enough for a big fall business. If you happen to be one of the very few S.W.P. agents who are not yet handling S.W.V. write us today for full information.



**THE SHERWIN-WILLIAMS CO.**  
PAINT AND VARNISH MAKERS.

CANADIAN HEADQUARTERS AND PLANT: 639 Centre Street, Montreal.  
WAREHOUSES: 86 York St., Toronto, Ontario. 147 Bannatyne St., East, Winnipeg, Manitoba.

1249

as the mixture gets weaker and the inflammation slower. The catalogue gives views of the complete engine, of the valve section, and of the plants in Cleveland and in Akron.

#### Glue Talk.

In the interests of the glue using trades the American Tanners Glue Co., Gowanda, N.Y., have commenced the edition of a monthly periodical devoted to the description of the properties, application and comparative qualities of glue. The August number is the first. It contains a very interesting talk on glue and its characteristics.

#### F. E. Kohler & Co.

F. E. Kohler & Co., manufacturers of hardware specialties, Canton, O., in their catalogue, 9 x 6 inches, describe and illustrate their various products. Among

these are: Post-hole diggers, lawn rakes, garden rakes, hand corn planters, steel sidewalk scrapers, garden trowels, garden hoes, saw sets, steel door pulls, D. tops, auto-rattlers, mechanical sprayers, hose menders, curry combs, mane combs and sweat scrapers. Accompanying the catalogue is a two-page circular describing the seasonable articles, snow shovels and furnace scoops.

#### Something Pneumatic.

The August number of "Something Pneumatic," issued monthly by the Chicago Pneumatic Tool Co., Chicago, contains a very interesting article on "Compressed Air and Pneumatic Tools in Railroad Service," being a paper read before the members of the Central Railway Club at Buffalo, N.Y., by T. Adams, general sales agent of the Chicago Pneumatic Tool Co., New York.



## Business Changes

### ONTARIO.

**C. J. W. NEALE & CO.**, builders' supplies, Toronto, have sold out to the Toronto Pottery Co.

**G. A. Moir & Co.**, hardware dealers, Ottawa, are giving up business.

**D. Nicholson**, general merchant, Pennington, is giving up business.

**S. J. Dempsey**, general merchant, Calabogie, has opened a branch at Renfrew.

### QUEBEC.

**Asselin & Lacombe** have registered as painters in Montreal.

**S. Leclerc**, general merchant, French Village, has assigned.

**J. D. Pilon & Cie**, general merchants, Dorion, have registered.

**Gratton & Tellier**, plumbers, Montreal, have dissolved partnership.

**L. E. Desilets**, general merchant, Shawinigan Falls, is offering to compromise.

**V. E. Paradis** has been appointed curator to **A. Dallaire**, general merchant, Tremblay.

The assets of **Eugene L'Ecuyer**, general merchant St. Polycarpe Junction, are to be sold.

**V. E. Paradis** has been appointed curator to **Samuel Viner**, general merchant, Rimouski.

A statement of the affairs of **H. Mercier**, general merchant, St. Ephrem D'Ypton, is being prepared.

A meeting of the creditors of **Narcisse Leclerc**, French Village, general merchant, will be held August 27.

A meeting of the creditors of **H. S. Frigon & Co.**, general merchants, Three Rivers, was announced for August 23.

**I. H. Constantin**, general merchant, Nominique, has assigned and a meeting of the creditors will be held August 29.

### NEW BRUNSWICK.

**F. Fulmer & Co.**, general merchants, St. Martin's, have assigned.

The blacksmith shop in connection with the general store belonging to **W. L. Belyea & Co.**, Sydney, has been destroyed by fire; loss \$200.

### MANITOBA AND N.W.T.

**W. Turner**, blacksmith, Melita, has sold out to **James McDonald**.



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To HAMMER the HAMMER

**IF IT IS AN IVER JOHNSON**

Our literature, especially "shots" describes this safety feature minutely; tells just how it works, why it works, and why it makes every Iver Johnson safe absolutely. Send for free copies.

New York Office: **IVER JOHNSON'S ARMS & CYCLE WORKS,**  
No. 99 Chambers St. FITCHBURG, MASS.

**M. Smith**, tinsmith, Innisfail, has sold out to **F. I. Constantine**.

**Miller & Co.**, hardware merchants' Moosomin, have sold out.

**T. D. Osborne**, plumber, Brandon, has assigned to **C. H. Newton**.

**Mrs. McDonald**, harness dealer, Belmont, has sold out to **J. Loiselle**.

The **Austro-Canadian Trading Co., Limited**, Winnipeg, has been incorporated.

**Black & Conleys**, hardware merchants, Gladstone, have been succeeded by **Black & Buck**.

**Cooper & Surkin**, late general merchants, Insinger, have assigned to **C. H. Newton**.

**Fisher & Ross**, general merchants, have sold their Leavings branch to **L. H. Ugland**.

**M. Krolik**, general merchant, Grenfell, has been succeeded by **Krolick & Schroeder**.

**G. M. Jackson**, general merchant, Poplar Point, has sold out to **Chas. H. Clarke & Co.**

**Bromley & Co.**, tent manufacturers, Winnipeg, have been succeeded by **Bromley & Hague Co., Limited**.

### TRADE RETURNS.

THE trade returns for the fiscal year ending June 30th, 1904, have been issued at Ottawa. They show, as compared with 1903, a decline of \$12,000,000 in Canada's total exports, and an increase of over \$17,000,000 in our imports. The decrease in exports is altogether due to a falling off in sales to Great Britain, and the increase in imports is mostly in purchases from the United States.

During 1903 Canada's exports to Great Britain amounted to \$131,202,321. In 1904 the value of exports to the Mother Country was \$117,591,376 a decrease of \$13,110,945. On the other hand, the exports to the United States increased from \$71,783,924 to \$73,173,549, an advance of \$1,389,625.

Canada's imports from Great Britain in 1903 amounted in value to \$58,896,901. In 1904 the value of imports from the Mother Country was \$61,770,379 an increase of \$2,873,478. Imports from the United States in 1903 were \$157,605,195. In 1904 the value of imports from that country was \$150,826,515, an increase of \$13,221,320. Canada's total trade in 1904 was \$251,457,137, an increase of \$17,666,621 over the total trade of the previous fiscal year. Nine months' operation of the surtax on German goods resulted in reducing the imports from that country by \$4,000,000.



August 27, 1904

HARDWARE AND METAL

# H. S. HOWLAND, SONS & CO. LIMITED

TEMPORARY WAREHOUSE:

Wholesale  
only

212-218 COWAN AVENUE, TORONTO.

Only  
wholesale

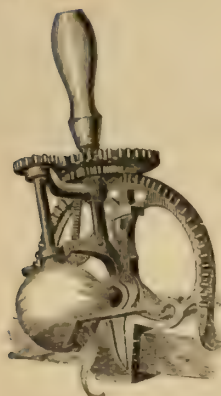
Sample Room at 21 SCOTT STREET, Telephone Main 4056.

Telephone:—Office, Park 1584.

(Where orders may be left if not convenient to visit our Warehouse at Parkdale.) Telephone:—Warehouse, Park 1585

RETURNED

AUG 27 1904



"NEW LIGHTNING"

## APPLE PARERS

RETURNED

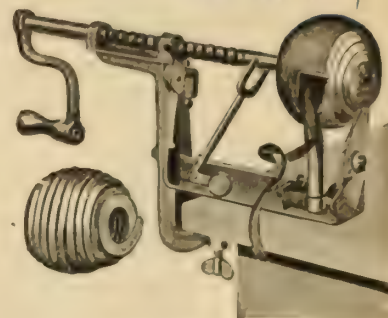
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"ROCKING TABLE"

RETURNED

AUG 27 1904



"LITTLE STAR"

RETURNED

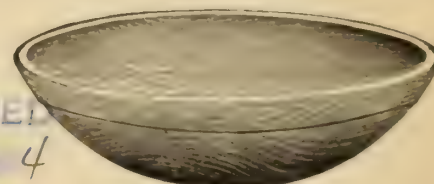


PARING KNIFE

RETURNED

AUG 27 1904

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CWS



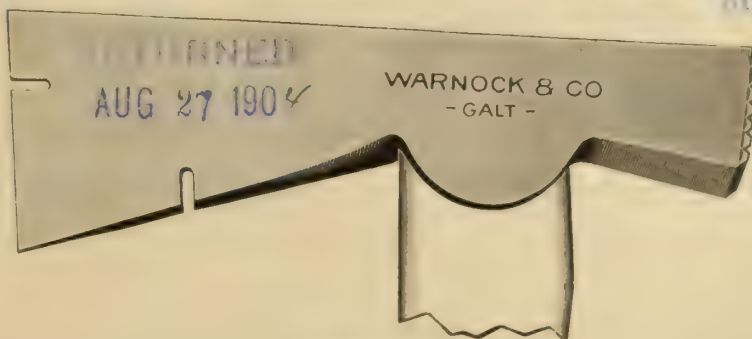
CHOPPING BOWL



FRUIT PICKER—  
Tinned

RETURNED

AUG 27 1904



BARREL HATCHET

RETURNED  
AUG 27 1904

WARNOCK & CO  
- GALT -

RETURNED

AUG 27 1904



FRUIT OR APPLE  
CUTTING PLIERS

Fuller particulars see our Hardware Catalogue.

## H. S. HOWLAND, SONS & CO., LIMITED, Toronto.

We Ship Promptly.

GRAHAM NAILS ARE THE BEST.

Factory: Dufferin Street, Toronto, Ont.

Our prices are right.



## Don't do all the work

Yet that is what you will do if you undertake to sell some unknown, untried, unadvertised stock food.

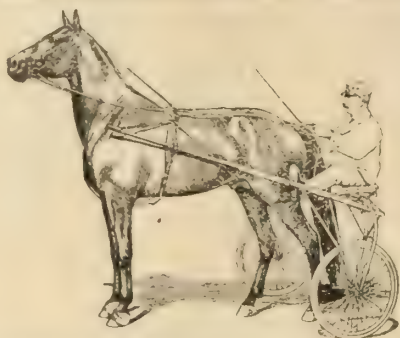
### International Stock Food

is the best advertised, best known, most strongly endorsed stock food in the world. It is the most readily sold. Indeed, the retail hardware dealer is called upon to do practically nothing towards selling our food; we sell it for him. He becomes the distributor for his section and gets well paid for it.

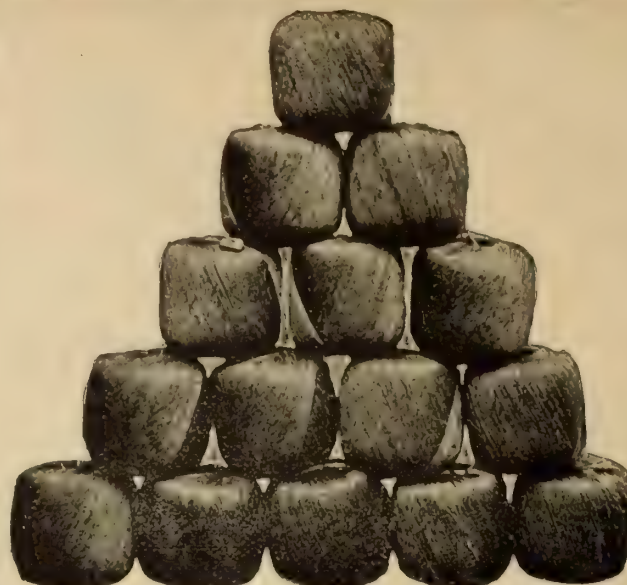
Write us at once concerning the agency for your section.

**INTERNATIONAL STOCK FOOD CO.**

**TORONTO, CANADA**



A large lithograph of DAN PATCH, Champion Harness Horse of the World, free to any reader of this paper.



**Royal Manila is the Best**

MADE IN CANADA.

Highest Quality. : Lowest Price.

WRITE, WIRE OR 'PHONE.

**CANADIAN CORDAGE & MFG. CO.,**

**PETERBOROUGH, ONT.**

**Limited**

# ASBESTOS

Pipe and Boiler Covering Sheatings, Building Felts, Roofings, Wall Plaster, Cements, Packings and Household Articles.

Catalogue, samples and lowest prices on request.

Write for our special Roofing Proposal to dealers.  
It is a winner.

**THE FAIRBANKS COMPANY**

MONTREAL.

TORONTO.

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VANCOUVER.



# MACHINERY

## MACHINERY MARKET.

### Quebec.

Office of HARDWARE AND METAL,

232 McGill Street

Montreal, Aug. 25, 1904

**P**REVIOUS weeks have seen the machinery market in a somewhat dull condition, and although the present finds no great change there is a more hopeful and encouraging tone to the market, than for some time past. The machine tool trade is a little less brisk, but some other lines, such as boilers and engines, wood working machinery and supplies, are moving well. The electrical machinery business is unusually active this week, proving one of the best for several months. Inquiries are also more numerous during the past few days.

### Ontario.

Office of HARDWARE AND METAL,

19 Front Street E

Toronto, August 26, 1904

The machinery market this week is brisk, not a few moderately sized orders having been placed. The volume of trade this week keeps up the record of the past two or three weeks, and the prospects for Fall trade are good. The demand for iron working tools is now very good, but there is a very brisk demand for engines and boilers, and also for wood working machinery, especially planing mill outfits.

### Machinery and Electrical Notes.

The Standard Construction Co., of Montreal, has just secured a contract for a complete power house installation for the Grey Nuns Hospital, St. Boniface, Man.

R. Moncel, St. Peter street, Montreal, has several large contracts for electric wiring installation, including the Dorken residence on Argyll avenue, F. X. St. Charles on St. Gabriel street, and fourteen stores on St. Catherine street.

The John McDougall Caledonia Iron Works, Montreal, have secured the contract for the installation of three batteries of standard water-tube boilers in the Montreal Waterworks department within three months. The contract price was \$15,350. The contract includes all fittings and the foundation.

## Economy of Steam Engines with Variable Load.

**T**HIS subject has been treated and discussed fully by Prof. R. C. Carpenter, in a paper on "The Variation in Economy of the Steam Engine," due to variation in load. In connection with using steam engines to run electrical machinery, one of the most serious difficulties is the fact that the plant is usually required to run for a large part of the time with a light load. The effect of this on the economy of an engine is very detrimental; the result being that the coal consumption in many electric light stations, as well as small plants, is about twice as great as if the total number of horse-power hours were developed by engines running uniformly at full load. He gives the pounds of water per horse-power hour required by the various types of engine, with 1-10, 1-4, 1-2, 3-4, 1, 1 1-4 and 1 1-2 times the rated capacity; and the general fact is that the water, and also coal consumption per horse-power are about 50 per cent. greater at 1-2 load, than at the rated load, and are over twice as great as 1-4 load. The variation in economy is not great between 3-4 and 1 1-4 times the rated load, but beyond these limits, particularly below, the increase in water consumption is very rapid, and one should therefore carefully avoid operating an engine except within this range of power. It is therefore very important that a judicious collection of the type and size of an engine or engines be made, so that they will be running within these limits.

The friction of most steam engines is 8 to 12 per cent. and continues nearly constant for all loads. Prof. Carpenter gives a number of tests of friction in various sizes and type. This is such a large factor in engines that it makes a great difference whether indicated horse-power or developed power is considered. The actual power at one-quarter of the indicated load, is only about one-eighth of the full value, and the corresponding economy is extremely low.

The mistake of running steam engines underloaded is very common, and is re-

sponsible for a large part of the inefficiency of electric light and power plants. The point of maximum efficiency is almost always made to correspond with the maximum load; whereas it should approximate the average load, since the full load may only exist for a few minutes each day. In other words, the engine should develop the average power at the best point of cut-off. As a matter of fact, the efficiency is not reduced as much by overload as by underload. Professor Carpenter shows that all types of engines consume only 5 or 10 per cent. more steam when 50 per cent. overloaded; but they require about 50 per cent. more steam at half-load. Furthermore, an engine is not injured by overloading, the only effect being to decrease its speed, which may be counteracted by raising the steam-pressure, or by regulating the dynamo. This plan would also save nearly one-quarter in first cost, since the rated power of the engine would only be about three-quarters of its maximum output.

With a light load, the low-pressure cylinder of an non-condensing compound engine performs little or no work, because the governor (whether throttle or cut-off) allows only a small weight of steam to be admitted to the high-pressure cylinder. If, for example, the quantity of steam is such that it expands to atmospheric pressure in the first cylinder, then the piston of the second cylinder must do work against the back pressure of the atmosphere, and thus acts as a drag. Even with a heavier load, when the action of the second cylinder is not entirely negative, it would evidently be desirable to completely disconnect it in order to eliminate its friction and complication. In a condensing engine, on the other hand, the back pressure, being almost wholly removed, the second cylinder always performs part of the useful work. Hence, for light, or variable loads, it may not be desirable to employ compound engines except with condensers. This statement also applies to triple, or quadruple-expansion engines, but to a still greater extent.



## VARIABLE SPEED MOTORS.

The application of the electric motor to the propulsion of a great variety of machinery has developed the fact that special designs of machines are necessary in order to fulfill the requirements of the various classes of work which are to be accomplished. The variety of requirements might be grouped into the following main divisions:

That class of machinery requiring a fixed speed, independent of the load, for which a standard shunt wound motor



Commercial Variable Speed Motor.

machine is especially suitable on account of its automatic regulation of the speed within very close limits.

That class of machinery requiring frequent starting and stopping under load, and which does not require constant speed and in which the operation of the machine is at all times directly under the control of the operator, by means of a lever, wheel or some similar controlling device. For this class, of which cranes, hoists and rolling-mill machinery are examples, the series wound motor is especially adapted on account of its ability to exert a strong starting torque with a comparatively small flow of current and its characteristic of running at high speeds under light loads and low speeds under heavy loads, which is frequently the normal condition of operating such machinery.

That class of machinery in which an approximately constant speed is desired but in which the perfection of regulation given by a shunt motor is not necessary and in which the occurrence of sudden wide fluctuations of load or the necessity of frequently starting or changing the direction of motion of a mass having large inertia requires the ability to develop a large torque with a small flow of current. For this class, among which are printing presses, elevators, punches, and shears, a compound wound motor is especially suitable, as it combines the

characteristics of the strong starting torque of the series motor with an approximation to the automatic regulating feature of the shunt motor.

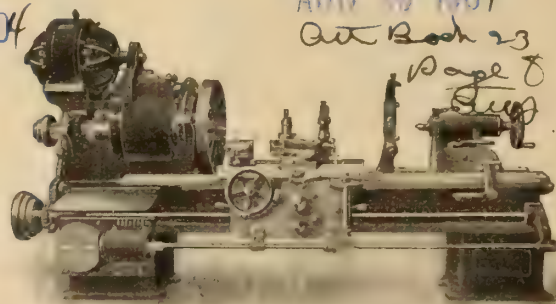
Those machines which require a great variation in speed with the heaviest torque or pulling power, at the slowest speed, and a less torque at a higher speed, the actual horse power or rate of doing work being the same at all speeds. Lathes, boring mills, milling machines, drills, with many others belong to this class, and to secure the greatest output from them it is necessary to run the work at the greatest cutting speed and take the heaviest cuts the tool will stand, whatever may be the nature of the work.

To accomplish this the horse power of the motor must not fall off when run at the low speeds required for large diameter.

The Commercial Variable Speed Motors accomplish the variation in speed by means of a double commutator machine, having two different windings, but each winding is of the same size conductor or of the same ampere capacity. A speed controller is furnished for making the necessary combination of these armature windings and for varying the field strength to secure intermediate steps between the armature combinations. These controllers are simple and compact and the changes from mini-



Controller and Stand



Engine Lathe, driven by Commercial Motor.

which can be placed at any desired point on a driven tool or which can be mounted on a stand conveniently.

Some of the strong points in connection with these motors are:

A range in speed of four to one in twelve uniformly graded steps without overlapping. The greatest torque, or pulling power, at the slowest speed, so that pieces of large diameter may be turned with as heavy cuts as smaller pieces. A constant maximum horse-power at all speeds; it does not fall off in capacity at the low speeds when the greatest effort is usually required. A practically constant speed at all loads when the controller is set at a given point. It does not slow down when you strike a deep cut and speed up when the tool runs out into air. A practically constant efficiency at all speeds and a high efficiency at all loads. It wastes no power in heating resistance coils or dinarily used to control the speed. It can be installed on any standard two wire or three wire direct current system, running from the same wires as constant speed motors or lights already installed. It does not require a special generating plant, motor-generator set or a special system of wiring. Therefore a single machine, or any number, can be installed without the consideration of an extra expense for special generators and wiring involved by other systems.

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Page 8  
Step

mum to maximum speed are easily and quickly effected. The controllers are made reversible.

Included in the above controller is the rotary starting and reversing switch by means of which the motor is started, stopped, and reversed, while the speed control is set at any desired point. The speed controller and starting switch are combined into one piece of apparatus and enclosed in a neat compact case

### Wadsworth Improved Core Machines.

MACHINE made cores are not new in the foundry trade, but foundrymen are just beginning to realize the saving which can be effected by their use. A number of factors have tended to retard the development of the core machine. Prominent among these is the fact that a mixture suitable for making cores by hand in core boxes is not suitable for the general run of machine work, and as a consequence many



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## MACHINERY WANTED.

Notices under this heading inserted free for subscribers to **HARDWARE AND METAL**.

**C**IRCULAR shears and double seaming machine, in good order. Moore Bros., Bradford, Ont. (29)

**S**CALES—Heavy; double iron column dormant scales; double beam; for grain warehouse. Box 36, Hensall, Ont.

**W**ANTED—An aspirator, single or double; state make. Box 31, Markham.

## SITUATIONS VACANT.

**A** FIRST-CLASS machinist wanted; accustomed to die and tool work and general fitting, in a city west of Toronto; steady employment to competent hand; a young man and a hustler preferred. Box 171, **HARDWARE AND METAL**, Toronto.

**M**ACHINIST WANTED—Who understands sewing machines. Apply Rhys D. Fairbairn, Limited, 8-10 Wellington east, Toronto.

**M**ACHINIST WANTED—A good machinist for general repair work; steady job. W. G. Paton, Wingham, Ont.

## SITUATIONS WANTED.

**B**Y mechanical draughtsman (mechanical engineering student) position for the winter in draughting office or some engineering works. Apply to Joseph Presner, 282 Selkirk avenue, Winnipeg.

## MACHINERY FOR SALE.

Rates for first insertion 2c a word, and for subsequent insertions 1c a word.

**A**RE you contemplating installing an elevator? Write Parkin Elevator Co., Hamilton, Ont., for particulars.

**F**ORGES—Portable and stationary—with and without down draft attachments, also forge blowers. Sheldon & Sheldon, Galt.

**F**OR heavy machine dressed, smooth running iron or steel gearing, write the Wm. Kennedy & Sons Limited, Owen Sound.

**G**AS and gasoline engines—stationary, marine, automobile, also launches, silver medal highest award Dominion Exhibition, Toronto; write for catalogue. The Gasoline Engine Company of Toronto Junction, Limited.

**M**ACHINERY for sale—Alternative current motors, made by Brown, Boveri & Co., Baden, Switzerland; excellent design; low price; prompt delivery from Canadian stock. Campbell & Renton, Kingston, Ont.

**M**ACHINE tools for prompt delivery—planers, shapers, lathes, drills, bolt cutters, milling machines, punches and shears, also full line of machinists supplies. Good second hand machinery taken in exchange. Show room open 7 a.m. to 11 p.m. H. W. Petrie, Toronto.

**G**AS AND GASOLINE ENGINES—Fairbanks 1 to 100 h.p., stationary, portable and marine, fully guaranteed; reliable and economical. Write for catalogue and prices. The Fairbanks Company, Toronto.

**M**ACHINE TOOLS for prompt delivery—Planers, shapers, lathes, drills, bolt cutters, milling machines, punches and shears, also full line of machinists supplies. Good second hand machinery taken in exchange. Show room open 7 a.m. to 11 p.m. H. W. Petrie, Toronto.

**O**NE second hand gap lathe, swings 40 in. and 26 in., 12 ft. 6 in. bed. Address Box 748, Montreal.

**O**NE second hand shafting lathe 26 in. swing 20 ft. bed. Address Box 748, Montreal.

**T**HE STUART MACHINERY CO., LTD., 764-766 Main street, Winnipeg, sole agents in the West for MacGregor Goulay's wood working and iron working machinery, than which there is none better. Also for Beardmore's leather belting, Dodge wood pulleys and self-oiling hangers, Soule steam feeds for sawmills, E. Leonard & Son's engines and boilers, Stratford flour mill machinery etc., etc., etc.

**P**UMPS—Standard duplex pumps in stock. The Smart Turner Machine Co. Limited, Hamilton.

## BUSINESS CHANCES.

**A** FIRST-CLASS Sawmill for sale cheap, in good condition, in good locality. Apply to Mr. N. Fulton, Box 59, Fingert, Ont.

**C**IDER MACHINERY—Hydraulic press, revolving table, 10 in. x 14 in. x 14 in. vertical and 14 in. diam. chopping stones, all complete. Box 36, Hensall, Ont.

**F**ACTORY ROOM TO RENT—Town of Dundas, cheap to right people, electric power, steam heat. Apply or write, I. A. Kammerer, 30 King street east, Toronto.

**P**OTTERY FOR SALE—A going concern—with a large connection, plant in first class order, a splendid opportunity. Apply Box M 97, **HARDWARE AND METAL**, Toronto.

**IF you want to Buy Machinery of any kind** We will insert an Announcement Free.

**IF you want to Sell Machinery of any kind** We will introduce you to hundreds of buyers.

Write for full particulars to

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**Hardware and Metal and Canadian Machinist**

MONTREAL TORONTO WINNIPEG

Corundum<sup>FOR</sup> Polishing

## OPINIONS OF USERS:

Factory "G." International Silver Co., Norwich, Conn., says:

"We find it will do just double the work that any emery we ever had would do. Wheels that have lasted us from ten to twelve days with emery are now lasting us from twenty-four to twenty-six with corundum. Besides the saving in time, the work itself is very much more satisfactory."

We are pleased to supply samples for testing purposes

**The Canada Corundum Company, Limited**  
TORONTO, CANADA.

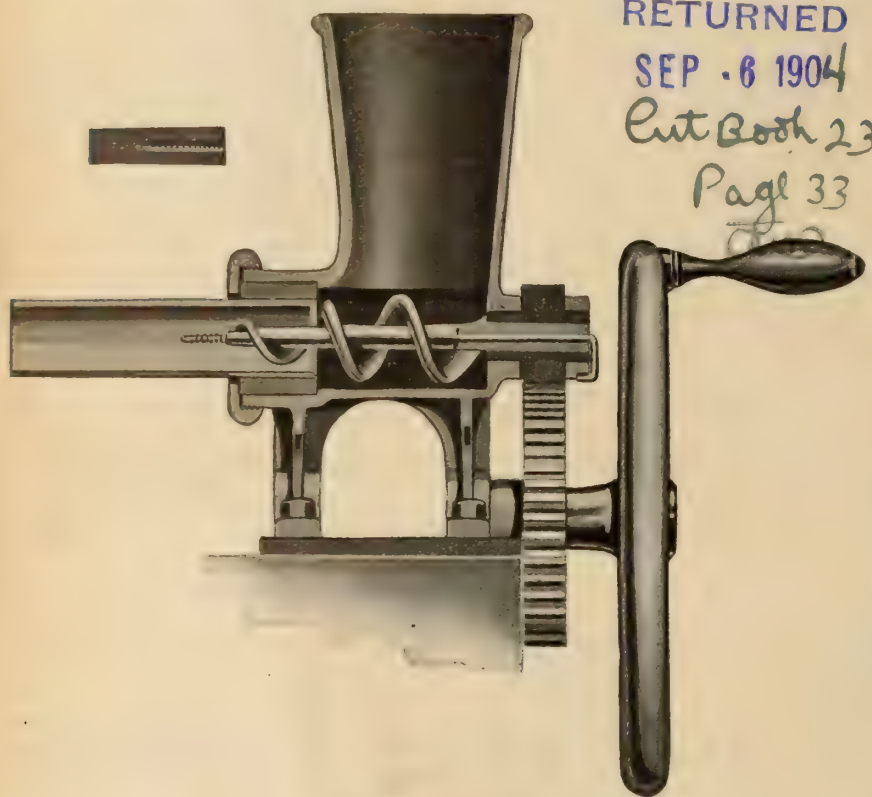


who have experimented along this line have been led to believe that cores could not be made by machinery as well as by hand. A moment's thought on this subject should convince any one that cores of practically any size should be capable of being made by machinery, provided the machine is properly arranged. A hand rammed core must of necessity be made more or less irregular in composition, that is, some parts must be rammed much harder than others, hence the venting must be irregular. In a hand rammed core the material in contact with the surface of the box does not move after it once comes in contact with the surface, but is compressed into form in the position in which it

ago for making small cores. With this machine they were able to produce cores of about 2-in. in diameter. Mr. Hads-worth has become connected with the Falls Rivet & Machine Co., of Cuyahoga Falls, O., and he there turned his attention immediately to the development of a larger and better core machine. The result is shown in the accompanying illustrations. This machine will produce cores from  $\frac{3}{8}$  in. up to 6 in. diameter. All cores have a continuous vent the entire length of the core. This vent is formed by a stationary vent wire about which the core slowly rotates as it passes through the die. As the cylindrical cores emerge from the machine they have a slight rotation

seconds. The cores are oil cores and require no rodding. The slicking of the surface presents a close surface to the metal, which reduces the tendency of the metal to penetrate the core, at the same time this slicked surface is sufficiently porous to enable the gases to penetrate to the more open portion of the core, and thus find their way to the vent very readily.

All stock cores are ordinarily made in lengths of 24 in. If they are required in shorter lengths for vertical work they are subsequently sawed to the required length and tapered by means of a special grinding attachment. It is a great deal quicker and cheaper to make standard cores, saw them to length and grind the ends, than it is to make half cores and paste them together. Then, too, the resulting product is very much better and more uniform.



Improved Core Machine.

first touched the core box. As a consequence, hand rammed cores can never have a smooth surface unless they are subsequently slicked.

The essential requisites of a good core machine for making large cylinder cores are that it shall feed the sand into the core in a continuous stream, that the resistance of the core shall be sufficient to insure proper packing or ramming of the core, that there shall be a sufficient slicking action in the dies to produce a good surface for the core, and that the core as it emerges from the machine shall be received upon a properly formed support.

Mr. Geo. H. Wadsworth and Mr. Sher-... invented a core machine some years

which assists in keeping them straight on the receiving plates. For the smaller sizes of cores corrugated iron receiving plates are used, while the larger sizes have special plates which fit about 1-3 of the circumference of the core.

On account of the fact that large cores require a slower action of the feed screw than small ones, this machine is so constructed that the driving pulley can be taken off from the stud on which it usually works and connected directly with the intermediate gear, thus increasing the speed of the machine in the ratio of one to three. With this machine from 200 to 600 feet of cores can be made per hour. A 6 in. core 24 in. long can be made in less than 20

#### The Adams Launch and Engine Co.

THE Adams Launch & Engine Co., Penetanguishene, which is composed of a couple of young men, brothers, of that name, who learned their trade in Peterborough, are developing a very satisfactory business in gasoline launch engines. They began a little over two years ago, and turned out ten engines last year. This year they sold fifty, and could have disposed of more if they could have produced them. They have just doubled their capacity and are going in more extensively than ever. Their castings are made by Payette & Co., who have a nice foundry in the same town.

The engines run from  $1\frac{1}{2}$  to 5 horse power, and are used for small launches. The 5 horse power is the largest one they build, but by putting double cylinders they develop a 10 horse power in launches running from 25 to 35 feet. They are staunch little craft, go most anywhere within a few miles of the shore, and among the islands in the Georgian Bay, draw 1 to 2 feet of water and sell for \$250. to \$800. Many of them have been bought by Americans who now summer in the Georgian Bay. There is likely to be a large increase, and boat builders would not be surprised to see many thousands of these craft in use in the next few years on our lakes and inland resorts.

So far the fast motor boats have not made their appearance. In any event they are not likely to be popular in the resort districts because of the numerous shoals, hidden rocks, sunken and floating rocks.



**IT WILL PAY YOU**



to stock the best globe valves "made in Canada."

KERR'S are made of the best steam metal, accurately fitted and perfectly tight.

CATALOGUE FOR THE ASKING.

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**PENBERTHY INJECTOR CO.,**  
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MADE IN CANADA



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The Threshing belt that gives the greatest satisfaction is the "MAPLE LEAF"

**Stitched Cotton Duck Belt**

MANUFACTURED ONLY BY THE

**DOMINION BELTING COMPANY**  
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Ask your dealer for it and take no other.

**Beware of Imitations**

Our "MAPLE LEAF" Belt Dressing is the best on the market—made only by us.



IT KNOCKS  
OUT COMPETITION.

**Manganese Anti-Friction Metal**

acknowledges no superior as a Babbitt Metal.

It is Reliable and Durable.

Every pound guaranteed.

Syracuse Smelting Works,

Montreal,  
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Seattle.

ASK YOUR DEALER FOR IT.

**H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING**

12, 16 and 20 Gauge.  
Steel and Twist Barrels  
Superior in Design, Workmanship  
and Finish, and the most popular  
Gun on the Market.

Simplest  
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Gun Made



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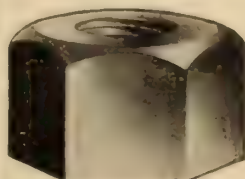
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STAR  
SPECIAL  
HERCULES  
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THE  
QUALITY & PRICE TO SUIT  
ALL GRADES OF WORK.

**CANADA METAL CO.**

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



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We are the only Canadian manufacturers of

**COLD PRESSED NUTS**

Finished, Semi-Finished, Case Hardened,  
Plated, Polished, etc.

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Head Office and Works, TORONTO, ONT.

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### The Value of System in the Foundry.

By J. C. K. ... N.Y.

A FEW years ago it was said with perhaps some truth that few foundrymen knew their cost, but at the present there can be very few such cases, since such loose methods will no longer go.

To be in business at all means that profit must be made. A system of cost keeping must therefore be adopted which shows exactly where one stands all the time. The orders must also be watched very carefully and constantly followed up. The foundry manager must be a practical moulder, who is familiar with all the details of shop work. He must have two qualifications, skill and character. He must be well read in the

foundry literature of the day, so that he can take advantage of every point of value to his firm. There is too much friction, occasionally, between the office and the works in carrying out the orders of the management, and hence come mistakes and bad results in the foundry. If the shop office were in closer touch with the management of the foundry proper, this would not be the case.

There should be system in the laying out of the work by the foreman. The orders and the patterns and core boxes should be carefully compared. The patterns should be studied to see if they are right, as this is often not the case, and means unlimited trouble and expense.

Now as to piece work. This is all right when the price is set so that the man can make at least the highest day rate paid. Where men work in groups the pay should be divided, and in case of difficult and large work a defective casting should be allowed at half price, or even sometimes at full price. In this

way the men will be contented and not object to the system, and this with little loss to the company. Where the castings are small the pay should be only for good work. Wherever there is piece work in a shop, the men should not be kept waiting for flasks, cores, etc.

Patterns should be well made and kept in good repair to facilitate the work of the moulder. There should be no lack of tools and appliances, system in this respect paying very handsomely. Supplies of chaplets, gagers and clamps, etc., should be on hand, and the foundry kept clean. Have a set time to put on the blast, and when the men are through pouring let them go home.

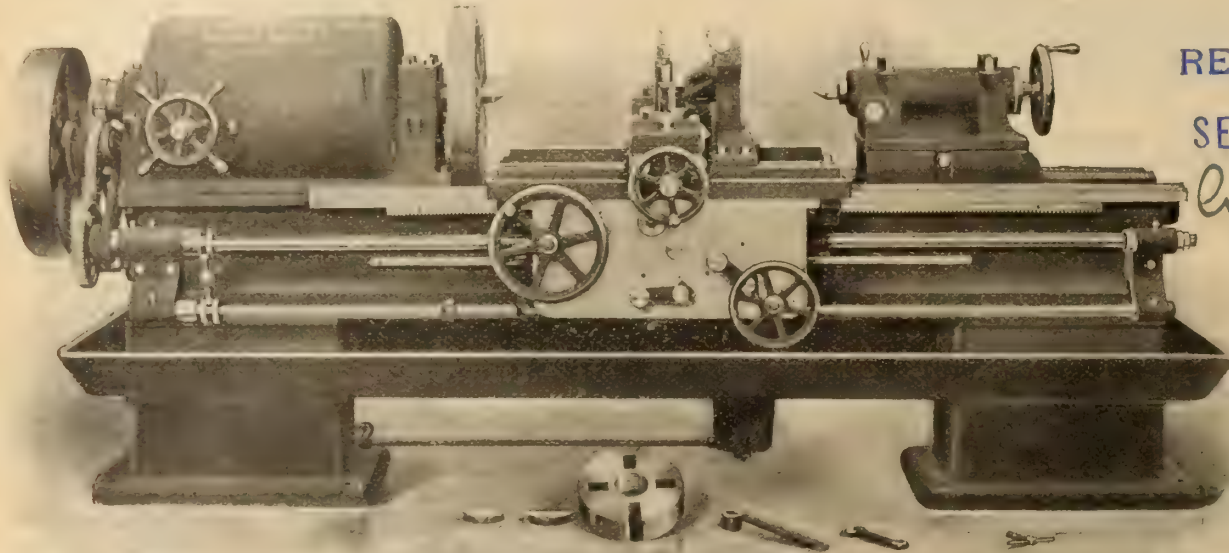
The foundry manager should mingle with the men as much as he can, and not

hold himself aloof in his office. He should treat men as men all the time, and make this a system as much as anything in the foundry, and the results need not be feared.

### New High Speed Steel Lathe.

THE accompanying engraving shows a new high speed belt-driven lathe being put upon the market by the Lodge & Shipley Machine Tool Co., Cincinnati, O.

In the designing of this lathe effort has been made successfully to produce a machine to meet the conditions that a lathe is called upon to fulfill when high speed steel is used for cutting tools. The tremendous strain that the driving gear, spindle and carrying apparatus have to sustain with the use of this



New High Speed Steel Engine.

steel on the ordinary engine lathe has been overcome in the design of this lathe. The question of lubrication has been well solved in the new design.

This lathe is adapted for turning locomotive, car and other axles. The apron has been improved so as to get rapid changes of speed.

Ordinary lathe chucks or other fixtures are as readily applied on this lathe as on the regular engine lathe, and any work, with the exception of screw cutting, performed on the ordinary engine lathe can be done on this, with the greater production due to the use of high speed steel.

Provision has been made for motor driving in simple manner, and a constant speed motor may be coupled directly to the machine, giving four changes of speed, and if the motor has a two to one variation, all the changes of speed necessary to the different diameters of work can be obtained.

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and



## About "C" Horse Nails.

If you are a dealer in horse shoe nails you have to decide which is the best for you to keep in stock and sell. You may not have sold any of our make and we therefore ask you to specify when next ordering, some of our "C" brand from your regular source of supply. If the dealer from whom you usually purchase substitutes any other brand or similar marks, please do us the favor, and yourself the simple justice of insisting upon having the particular brand you order, or return the goods. If you then cannot get our "C" brand, write us direct and we shall see that you get all you want.

In purchasing the "C" brand in preference to others, you are obtaining the product of the oldest and largest horse nail works in the Dominion, who have made horse nails and nothing else for the past 39 years. You have the absolute guarantee of our company that every box is perfect and as represented by us. You therefore take no risk in buying them. If they are not as we claim they may be returned and all expenses will be reimbursed by us. The farriers all like them because they give them no trouble, and the dealers all like them for the same reason. What more do you want? Your orders therefore respectfully solicited.

**Canada Horse Nail Company**  
MONTREAL

**\$2** FOR THIS SMALL SUM THE **\$2**  
**MANUFACTURER and SUPPLY MERCHANT**  
may keep posted on new openings  
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**The CANADIAN CONTRACT RECORD**  
reports weekly all projected building and other  
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Send your name and address with \$2 for  
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**\$2** TORONTO and MONTREAL **\$2**

## Want Ads.

In this paper cost 2 cents per word first insertion, 1 cent per word subsequent insertions. Contractions count as one word, but five figures (such as \$1,000) may pass as one word. Cash remittance to cover cost **must in all cases** accompany orders, otherwise we cannot insert the advertisement. When replies come in our care 5 cents additional must be included for forwarding same. Many large business deals have been brought about through advertisements of 20 or 30 words. Clerks can be secured, articles sold and exchanged, at small expenditure.

**MacLEAN PUBLISHING CO., Limited**  
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## Quality

The quality of an axe should be the most important point for the retailer to consider. Don't let your axe trade get away from you by buying low grade axes. They may look all right and sell well for a time, but in the end quality always counts. If you want to build up a large and permanent axe trade buy

## Kelly Axes

## Our Stock

of axes is very complete, consisting of the best selling lines of the leading manufacturers. By ordering now you are assured of first choice. Later on in the season, it is often an impossibility to supply some lines of axes. The demand exceeds the supply. Write at once for prices.

**John Bowman**  
Hardware  
and Coal Co.

LONDON. — CANADA.





# THE CANADIAN NATIONAL EXHIBITION

On August 29th, the directors of the Toronto Exhibition Association will once more throw open the gates of Exhibition Park to the public, and for two weeks, what will be known as The Canadian National Exhibition, will be full swing. As in past years, so in 1904, the directors have spared no effort to keep up the reputation for sterling excellence, which the Toronto Exhibition has always enjoyed.

## Exhibits.

The plan of the Exhibition covers two distinct fields. On the one hand are the exhibits of art, science, industry and agriculture, and on the other hand the amusements, provided in music, pyrotechnic displays, special acts and social gatherings.

The exhibits include, in the manufacturers and liberal arts section, all that is newest and best in Canadian industry, and these are displayed in the handsome new Manufacturers Building.

The fine arts are represented by a collection of paintings and sculptures, to be found in the Art gallery, also a new and admirably arranged structure.

In the live stock and agricultural section, the exhibits cover the best of everything that is produced on the Canadian farm. Processes of manufacture are illustrated in a special building. Cats, dogs, poultry and other pets have a section devoted to themselves, and last, but not least, there is the women's section, which includes a great variety of articles made by or of special interest to women.

## Amusements.

As a special attraction during the whole exhibition, the management have secured the services of the famous band of the 42nd Royal Highlanders—"The Black Watch." This band will play three times a day. Before the grand stand this year will be performed each evening a pyro-military pageant, descriptive of "The Relief of Lucknow." This will be followed by a display of fireworks.

The special acts before the grand stand will include Dare-Devil Schreyer in his 108-foot dive from a bicycle into two feet of water; Winschermann's marvellous troupe of trained bears; Adjie and his lions and the Bickett family in acrobatic feats.

Corresponding to the "Pike" at St. Louis, will be "Vanity Fair," a gathering of interesting and entertaining specialties, where old and young alike will derive instruction and enjoyment.

## The Black Watch Band.

Apropos of the appearance of the Black Watch Band in Canada, it might be explained that the famous regiment, of which the band forms a part, was organized one hundred and sixty-five years ago, and has been employed almost continuously in the defence of the Empire ever since. Its first great service was in Flanders in 1743, its last at

## Manufacturers Exhibit.

The new Manufacturers and Liberal Arts Building contains 165,000 square feet of floor space, and has been especially constructed to permit of the best possible display of specimens. The enterprise of Canadian manufacturers is becoming each year more widely known, and even at this early date, the number of applications for floor space indicates a completeness in the displays of this department which will far outdo any previous year. The exhibits of manufactured articles are being more perfectly divided into their various sections than has heretofore been the case, and



Manufacturers' Building—Canadian National Exhibition.

Magersfontein in 1899. In the interim the regiment passed through bitter struggles during the War of the Revolution, hardships in the West Indies, arduous service in the conquest of Canada. This long period of active service stamps the regiment as one of the greatest in the British Army.

The Black Watch Band is a worthy adjunct to the 42nd Regiment. It consists of 60 pieces, including pipers, and has a reputation for excellent playing that is as world-wide as is the fame of the Regiment for brave fighting.

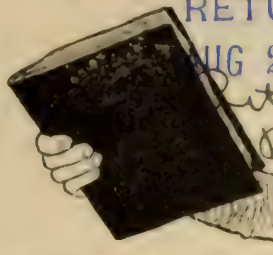
visitors are assured of much interest and entertainment in their examination of the numberless lines of goods to be found in this building. So extensive will be the display of manufactured goods, that an annex has been provided to meet the overflow.

## The Process of Manufacture.

In the Process of Manufacture Building is to be seen the active work involved in the production of a great variety of useful articles. The making of rugs and carpets; the manufacture of silk materials; the printing and binding



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By this greatest of modern Office Labor Saving inventions you are enabled to keep all correspondence relating to one subject or correspondent together, no confusion, everything kept intact, reference made easy. Don't be without it any longer. Used by the most successful business men of America. Write for circular. Full line of Office Labor Saving Devices and Office Furniture in stock.

Keep-to-gether System

THE OFFICE SPECIALTY MFG. CO., Limited, 55 Yonge St., TORONTO.

Factories NEWMARKET.

New City Premises 97-103 Wellington St. W.

## P. H. BENDS BUT DOES NOT BREAK



Trade Mark.

Crown Pipe

This can't be said of the common pipe.

Insist upon Crown Brand Pipe. Quality will be remembered long after price has been forgotten.



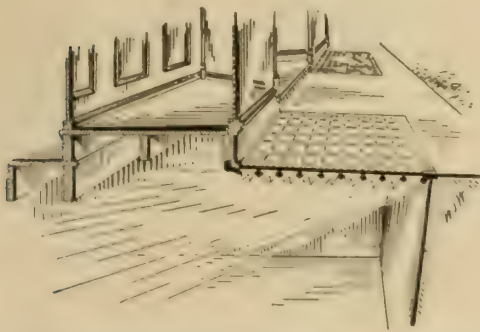
## PAGE-HERSEY IRON AND TUBE CO., GUELPH, LIMITED, ONTARIO

### STORE ALTERATIONS

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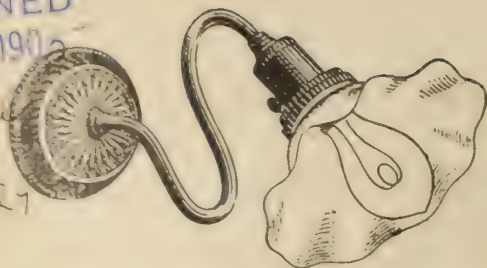
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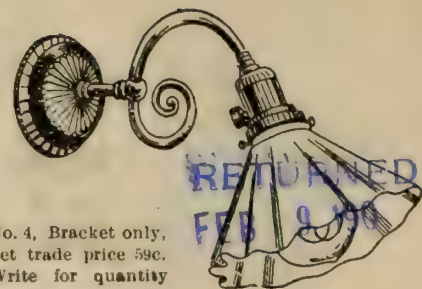
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of books; the making of shoes and boxes; the production of almost countless articles of daily use, from the raw material to the finished article, are illustrated. These demonstrations, completely given and intelligently explained, will afford to those who witness them some slight idea of the great value and importance which the manufacturing interests of the Dominion possess in the building-up of Canada's prosperity and greatness.

### Three Masterpieces.

One entire room of the Art Building has been set aside this year for the exhibition of three original masterpieces aggregating in value \$200,000. These are the property of and are exhibited through the courtesy of Sir George A. Drummond, of Montreal. They are the "Raising of Jairus' Daughter," by Gabriel Max; the "Last of the Gironists," by Carl von Pilotz, and "A Moorish Conqueror Surveying the Spoils of a Christian City," by Benjamin Constant.

### New Administration Building.

Hitherto one of the most annoying inconveniences to which exhibitors have been subject has been the lack of a concise and systematic arrangement in the administration department. The offices of the various departments were located here, there and everywhere, with the result that exhibitors were compelled to go from point to point to arrange for reservations and to make other arrangements for displaying their various lines. This year a new administration building has been erected on the grounds, which should prove of great convenience to exhibitors. In one large room have been grouped together the representatives of all the buildings and all the departments. Whether one is showing a traction engine, a thoroughbred horse or a dainty piece of embroidery, entries can be made and display arranged for by application at this central office.

### Cheap Railway Fares.

As usual in past years, special arrangements have been made with the transportation companies, under which the lines entering Toronto, will provide

cheap rates during the continuance of the Exhibition. On special days, extra low rates will be provided. These travelling arrangements are always carried out to the letter, and those contemplating a visit to the Exhibition will find everything in this respect to their satisfaction.

### THE ELECTRO GRIP.

ANYONE who has had occasion to shift an electric lamp attached to a cord from place to place, or direct it upon the work at hand, knows the inconvenience of manipulating the cord. A knot takes time to make, and the length is not easily adjusted. This difficulty has been met with and overcome by a simple device known as the electrogrip, which is made of wire. It is attached to the lamp socket, while a pair of jaws grip the cord or any available object near the place desired for the lamp. By pressing the arm to the centre, the jaws will open. If the object to be attached is placed between them, the springs will do the rest. With its use the light can be thrown where required, and done quickly. It does not wear the insulation off the cord, and on defective cords and sockets prevents short circuiting, as the jaws are heavily insulated. The electrogrip may be had from the R. E. T. Pringle Co., Montreal.

### TELEPHONE CARD DISPLAY DEVICE.

THE Electrical World and Engineer describes a new device, the purpose of which is to provide a simple, convenient and inexpensive means of bringing before the eye of the telephone user any one of a number of cards and automatically holding them in position to be read, and when desired instantly returned to their original position. It is thus adapted for use as an ordinary telephone directory of a num-

ber of persons or business houses, with whom communication is frequent. Each firm's name is written or printed at the top of the card, on which is also printed the index letter of the name in large red type. Under the name is placed the telephone number and exchange, and under that any announcement pertaining to the business of the firm that may be desired. These cards are arranged alphabetically in narrow slots, radiating from the centre of a cylindrical holder.

This holder and its radiating cards are then mounted on a shaft, terminating in a milled nut, which projects through the sides of the cylindrical case, in which the whole is enclosed. This cylindrical case has a short section removed from its periphery, and a deflector inserted, whose purpose it is to engage the top of the cards as they are rotated and bend them back so as to make the card directly in front plainly visible. The case is provided with a suitable clamp for fastening the device to the upper part of the telephone stand, or to a wall phone as desired.

When it is desired to find the number of a person whose card is contained in the directory, the milled nut is turned and the large red index letters rapidly and consecutively pass before the eye. When the index letter desired approaches the nut is turned slower, until the desired card springs into position, where it remains until the directory is again used. It will be seen that with such an arrangement the finding of any name on the list is practically instantaneous. The time consumed in finding any card is not more than two or three seconds.

The fact that the card is automatically held in position to read after once found, will avoid the confusion and annoyance accompanying the forgetting and subsequent refinding of a number or exchange, just as the operator is answering after a detention, the card always being before the eye. The cards are perfectly plain, having no special cutting to hold them in, and an ordinary business card of the proper size may be easily inserted.

The instrument presents a neat appearance, being nickel plated and clamped on the upper part of the telephone stand so as not to interfere with the handling of same, and having about the same weight as the receiver balances the instrument very nicely. It can also be attached to a wall telephone, or mounted on a suitable base and used as a combination business directory and paper weight.



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**NAILS**

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**Ship  
Spikes,**  
**Drift  
Bolts,**  
**Railway  
Spikes.**

**Wire Nails,  
Cut Nails  
& Tacks,  
Horse Shoes,  
Horse Nails,  
Shovel &  
Hinge Plate.**

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**THE PECK ROLLING MILLS Limited,**

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President:

JOHN BAYNE MACLEAN.

Montreal.

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### NEW ADVERTISEMENTS.

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### MARITIME BOARD OF TRADE.

AS a feature of this week's issue Hardware and Metal is pleased to submit a full report of the Maritime Board of Trade convention at Moncton on August 17, 18 and 19. This is the twelfth consecutive time the amalgamated Boards of Trade of the Provinces of Nova Scotia, New Brunswick and Prince Edward Island have met in a convention which now ranks as one of the most important on the North American continent.

A Board of Trade is the place par excellence for the consideration of all matters affecting the industrial or commercial interests of a nation; none can speak with such knowledge and authority upon these things as those who are actually engaged in mercantile pursuits. The legislators of a nation are, as a rule, more or less closely in touch with its business men; at any rate it is the latter who wield the greatest influence

in Canada, and those who make the laws must in the long run take their queue from the merchant, the banker, the lawyer, etc.

At the present time Canada is faced with a number of important questions such as the proposed "Transcontinental Railway line," "the fast steamship line," "Government ownership," and the "preferential tariff," all of which must be dealt with summarily; in turn there are other questions affecting only certain parts of the country. Nothing but good can come from the discussion of these problems by such a representative organization as the Maritime Board of Trade, whose constituent members are among the most representative business men in Eastern Canada.

### ARTISANS WANTED.

ONE of the most tangible evidences of Canada's present prosperous condition is the fact that on all sides the supply of skilled labor is inadequate for the demand. This is all the more striking in view of the fact that in the United States manufacturers have been discharging large numbers of their employes within the past few months. In many Canadian manufacturing establishments benches are standing empty for want of men, which shows clearly the activity in industrial conditions in the Dominion.

From time to time recently the Canadian Manufacturers' Association has announced that there was a scarcity of skilled labor in Canada. The real state of affairs was thus brought before the British press. Various labor councils had been denying that there was such a scarcity and contending that they could supply all, and more men than were necessary. The matter was put to an actual test, however, when the Montreal secretary of the manufacturers' association asked the local trades and labor council to provide certain mechanics for manufacturing establishments in different sections of the country. They undertook to do this, saying they were confident that it was an easy task. It transpired that the undertaking was beyond their power to execute, and they

were forced to admit that they could not secure the men required, although they were given a reasonable time to do so. Harness-makers, shirt-makers, and tradesmen of other kinds are called for, and their places are still vacant.

Although the situation is not at all agreeable to the manufacturers, as they are doubtless hindered considerably from producing a maximum output, it is one of the most hopeful signs that could exist. "More men needed in well established industries" is synonymous with progress and advancement. It is not only an assurance that the country is in a flourishing condition, but it is a good omen for the near future.

### HIGH PRICES FOR WHEAT.

THE language of the wheat market although general rather than particular, at the present time, is to be construed as indicating higher prices for wheat during the coming months than have ruled for many years. At the bottom of this fact the world's production is 190,000,000 bushels short. The European countries to which Canada exports will require more wheat than usual but it is doubtful whether the yield here will be sufficient to permit of as large an export as last season. Eastern Canada will require all her wheat for home consumption and will in all probability have to draw upon the Northwest.

In Manitoba and the Territories the situation is uncertain. There are conflicting reports concerning the damage likely to be sustained by the growing grain crops from rust, and the actual conditions cannot be estimated for another week or ten days. The opinion is expressed, however, that the West will not have as much grain for export as usual. Nothing can take the place of Manitoba hard wheat in the eyes of the British miller, which means that although the English market just now is not in it with the high prices ruling in Canada, the situation across the water will presently be more favorable to sellers.

The high prices prevailing for wheat will do much to offset the losses resulting from rust or other causes and will help to maintain confidence of business men in western business.



## A PERSONAL VISIT OF THE WEST.

**I**T is recognized that if a man is to develop his business to the fullest extent he must keep in personal touch with the conditions under which it is conducted. Not only should he have personal knowledge of the operations or processes by which his wares are produced, but he must have intimate acquaintance with the conditions under which they are sold.

Nor can any business man gauge the conditions existing in one section of a big country like Canada by intimate knowledge of the conditions prevailing in other sections. A manufacturer might, by careful study, acquaint himself thoroughly with the conditions affecting the sale of his goods in Ontario, and so adjust his operations to make the most of his business. Yet, this knowledge of Ontario's needs would be of small avail in an endeavor to build up a business connection in Manitoba and the west.

The conditions prevailing in the west are essentially different from those in the east. In the east there is, in most lines, strong local competition by manufacturers, so the primal need is economy of production; to reduce to a minimum the costs of manufacture. Generally speaking, Canadian manufacturers have so studied the needs of Ontario and Quebec that they are able to maintain their position against foreign competition; they are able, in short, to get their full share of the business in these provinces.

In the Canadian west, however, conditions are materially different. There are practically no manufacturers, though it is only a question of time till there will be in Manitoba and the west. Nearly all manufactured goods must be imported. Heavy freight charges on the one hand, and the keen competition of U. S. manufacturers on the other, combine to create conditions more difficult to solve than those they have encountered in the market nearer their base of production. In fact, the situation demands separate study and distinctly different treatment than is necessary in Eastern Ontario.

The western market is too important for the manufacturer to neglect, however. The increase of population in

Manitoba and the Territories has probably been, during the last year or two, greater than in all the rest of Canada together. In equal proportion the demands for all the necessities of life have increased in the west. So great has been the growth of consumption in some lines that in many cases Canadian manufacturers have not been able to keep the western market supplied, the result being that in many cases there has been a steady growth of immigration.

The arguments that apply to the manufacturers can with equal force be used in regard to the wholesale houses. If any firm desires to do business in all parts of Canada it must recognize that the competition of United States manufacturers is a more serious problem in the west than in the east, that the transportation and storage problems of the east are in no degree comparable with those of the west.

In short, if a business man desires his business to be more than provincial he should get a footing in the west as early as possible. And to get a proper footing he should visit the country himself and take enough time to study the needs of the country thoroughly.

### IN RESTRAINT OF TRADE.

**J**UST when Toronto's fire district was being covered with sightly buildings, just when the unfortunate business men were in strongest hopes of being safely housed for Winter, and of seeing a resumption of business that has been delayed for almost five months, all their hopes and those of the city for the building up of an unsightly block in the centre of the wholesale district are dashed to the ground by the strike of the builders' laborers. The stonemasons' and Bricklayers' Unions contrary to the established practice of unionism, and in direct contravention of their contract with the master builders, have inaugurated a sympathetic strike.

In the burnt district to-day, over one week after the commencement of the strike, scarcely a hammer is heard, and

not a brick is being laid save in the cases where the imminent completion of the work induced contractors to grant the extra three cents an hour demanded. And it is all because a union of unskilled laborers are unsatisfied with two dollars a day of eight hours.

Last year the same union, after a thirteen weeks' fight, during which they were offered 21-2 cents an hour extra—within a half cent of what they asked—were forced to resume work at the old wages. Taking the working year of the length stated by the union—150 days—each week of idleness means the increased pay demanded of a third of a year, so that the fifteen weeks they have been idle already in the past two years will equal (supposing they win) the additional earnings of five years at the higher wage. The strike wage must not be considered, since this should in justice be returned, during busy years, for the benefit of striking laborers who have helped to contribute the amount in question.

And in this strike, as in every other, there are a great number of married men with families who are forced to quit work, much against their will. In this case over a quarter of those at the meeting voted against the strike and it is natural to suppose that a greater majority of the disaffected attended than those who desired to continue work.

However, justice or injustice has very little to do with the solution of a Toronto strike. Might is right, and a stand once taken will be adhered to to the last moment by both parties. In the meantime such large buildings as those of the W. R. Brock Co. and Gordon Mackay & Co. are lying half finished, although the wage demanded without recognition of the union, has been offered.

Mr. E. Dowsley, of A. Ramsay & Son, returned to Montreal this week from an extended European visit. Mr. Dowsley, who was accompanied by his wife, visited in the British Isles, France, Germany and Belgium. His friends will be glad to learn that he has returned to business with restored health.



## PITTSBURG METAL MARKETS

From the Iron Trade Review, Aug. 27, 1904.

**T**HE first session of the most important conference of leading steel interests this year was held in New York recently. Whatever action is taken at these meetings will be of utmost interest to consumers of finished materials, and if reductions are made all along the line, it is generally believed active buying will follow, and that it may prove the turning point in the direction of better trade conditions. A new and more binding agreement among the steel producers is under discussion, and a reduction of the official prices is expected. Any reduction in the price of billets will also be followed by a corresponding reduction in steel bars, but the agreement on the latter has been pretty firmly adhered to by all the mills and no trouble is looked for in continuing this agreement. On plates it is reported that one mill has been taking business the past ten days regardless of price, and unless some more binding agreement is reached than now exists, an open market can be looked for. On structural shapes a new agreement is also demanded by some of the mills. They contend that producers of structural shapes having their own fitting departments have been in position to take business below the quotations named by structural fitters who are compelled to buy their material from outside mills, and while the labor costs for the fitting is practically the same in both instances the lower quotations named by the fabricators is based on a price below the official on structural shapes.

**Pig Iron**—The pig iron market has been extremely quiet during the week, transactions being limited to small lots almost entirely. The market on Northern No. 2 is somewhat stronger than it has been and none of the furnaces in the Valleys are willing to shade \$12 at the furnace, although iron from other stacks in this state is offered at \$12.65, Pittsburgh. The Bessemer iron market is somewhat weaker, and while \$12 at the furnace cannot be shaded for extended delivery, small lots for prompt shipment can be had at from 10 to 20 c below this price. Southern iron for delivery the remainder of the year can now be had on the basis of \$9.25, Birmingham for No. 2, the sale of 500 tons having been reported at this price. There have been few transactions in forge iron, which continues to be held on the basis of \$12, Pittsburgh.

|                                 |            |         |
|---------------------------------|------------|---------|
| Bessemer, Valley .....          | \$11 90 to | \$12 00 |
| Bessemer, Pittsburgh .....      | 12 75 to   | 12 85   |
| No. 1 Foundry .....             | 13 00 to   | 13 25   |
| No. 2 Foundry .....             | 12 65 to   | 12 85   |
| Grav forge, Pittsburgh .....    | 12 00 to   | 12 15   |
| Chilled basic, Valley .....     | 11 75 to   | 11 95   |
| Chilled basic, Pittsburgh ..... | 12 60 to   | 12 75   |

**Steel**—The billet and sheet bar market has been unusually quiet, consumers being unwilling to place additional orders until the looked-for developments have materialized. Agreed quotations are as follows: Bessemer and open-hearth billets, 4x1 inches, and slabs up to and including 0.25 carbon, \$23 Pittsburgh, Wheeling, Valley, Johnstown, Ashland, Ky., Ironton, O., and Lorain, O.; 0.26 and including 0.60 carbon, \$1 ad-

vance; and 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 3½ inches and sheets and tin bars are \$1 per ton extra. Bessemer and open hearth rods quoted at \$28 to \$28.50 Pittsburgh.

**Plates**—To fill the steel car orders placed during the week no less than 16,000 tons of plates will be required. Other business is light, however, and little new business will be placed until after the present New York conference is ended. We quote as follows: Tank plates, ¼ inch thick, and up to 100 inches in width, 1.60c at mill, Pittsburgh; flange and boiler steel, 1.70c, marine, ordinary firebox, A. B. M. A specifications, 1.80c; still bottom steel, 6.85c; locomotive firebox, not less than 2.10c, and it ranges in price to 3c. Plates, more than 10 inches, 5c extra 160 lbs. Plates 3-16 inch in thickness, \$2 extra, gauges Nos. 7 and 8, \$3 extra. These quotations are based on carload lots with 5c extra a hundred pounds for less than carload lots. Terms, next cash in 30 days.

**Bars**—The market continues quiet, specifications on steel bars on contracts now in force being lighter than at any time this Summer. There is little demand for iron bars, which are selling on the basis of 1.25c, Pittsburgh, although one large producer refuses to shade 1.30c. We make the following quotations: Bar iron, 1.25c to 1.30c Pittsburgh for local delivery, while for Western shipments quotations are based on 1.25c to 1.35c Pittsburgh. Hoops are held at 1.55c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open hearth, 1.40c; plow beams and cultivator beams, 1.35c net; channels, angles, zeos and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 lbs. of a size, not less than 1,000 lbs., 10c advance; less than 1,000 lbs. of a size, 30c advance.

**Sheets**—There is little activity in the sheet trade, and, with bars selling at \$24, there is little opportunity to shade the finished product. We make the following quotations: No. 8, 1.60c; No. 9, 1.56c; Nos. 12 to 14, 1.70c; Nos. 15-17, 1.75 to 1.80c; Nos. 18-21, 1.85c to 1.90c; Nos. 22-24, 1.95c; Nos. 25-26, 2c; No. 27, 2.05c; No. 28, 2.10c to 2.15c; No. 29, 2.35c to 2.40c; No. 30, 2.50c to 2.55c. Galvanized: Nos. 12-17, 2.20c to 2.25c; Nos. 18-21, 2.35c to 2.40c; Nos. 22-24, 2.50c to 2.55c; Nos. 25-26, 2.65c to 2.70c; No. 27, 2.90c; No. 28, 3.10c; No. 29, 3.45c to 3.50c; No. 30, 3.85c to 3.90c.

**Wire and Wire Nails**—Reduced prices on wire products announced by the American Steel & Wire Co. have already been followed by concessions announced by the Pittsburgh Steel Co., this concern having notified the trade that it will accept orders for mixed carloads at the inside price to recognized jobbers announced by the American Steel & Wire Co. This amounts to a reduction of practically \$1 per ton. We make the following quotations: Wire nails, jobbers' carload lots, \$1.60; retailers' carloads, \$1.65, and less than carloads, \$1.75; painted barb wire, \$1.75 to jobbers in carloads; retailers' carloads, \$1.80, and less than carloads, \$1.90, with 30 cents for galvanizing. Annealed smooth fence wire is held at \$1.45, with the usual differentials to retailers for

carloads and less than carloads. Quotations are all f. o. b. Pittsburgh, 60 days, with 2 per cent discount for cash in ten days. Iron and steel cut nails are held at \$1.65 to \$1.70.

**Old Material**—The market generally is somewhat weaker, although dealers are not anxious to meet the lower prices. Heavy melting stock is again on the basis of \$11.50, although several large mills refuse to meet this price.

**Coke**—The coke market is somewhat firmer, none of the Connellsville producers being willing to shade \$1.10 for delivery over the remainder of the last half, while \$1.35 for prompt shipment on furnace coke can be done only with difficulty. On foundry coke prices range from \$1.85 to above \$2. During the week ending Saturday, Aug. 13, the production of the upper region amounted to 151,293 tons and the output of the lower was 51,630. More than 11,000 ovens in the two regions continue idle.

## LONDON METAL MARKET.

From The Metal Market Review, August 24, 1904.

**Pig Iron**—Scotch warrants Glasgow closed at 51s 9d, being a slump of 3d since last week. Middleboro No. 3 foundry closed at 42s 10 1-2d, being a slump of 7 1-2d since last week.

**Tin**—Spot tin opened firm at £122 5s, futures £122 15s and after sales of 90 tons of spot and 160 tons of futures closed firm at £122 7s 6d for spot and £123 for futures, making price as compared with last issue 9s 6d higher for spot and 7s higher for futures.

**Lead**—The market closed at £11 13s 9d, 2s 6d higher than last week.

**Spelter**—The market closed at £22 12s 6d, making price as compared with last week 2s 6d higher.

## CHANGES ON THE ROAD.

Mr. George B. Ball, who covers Ontario from Belleville to Windsor for Waterson & Co., will transfer his services next week to A. C. Leslie & Co., taking charge of his old territory. Mr. A. Denny, now with the Gurney-Tilden Co., will take Mr. Ball's place with Waterson & Co. Mr. Leslie, formerly traveling on this route for Leslie & Co., has gone into the manufacturing business in Toronto.

## AN ENLARGED FACTORY.

Considerable additions have been made to the factory of A. Aubay & Fils, which is situated at 600 Delorimier avenue, Montreal. It has now more than double its former capacity, and when everything is in running order this firm should be in a position to give their customers the best and most prompt attention. The offices and showrooms are very handsome and the whole factory is a model of its kind. A rapidly increasing business made these additions an absolute necessity.



*Silverware that sells*

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**Hayter Street, TORONTO,**

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# Coal Hods and Stove Boards

With the Fall impetus in stove-buying and moving, there will be a brisk demand for Coal Hods and Stove Boards.

The dealers who buy from the manufacturers making the largest assortment and best-wearing "hods" and "boards" will naturally sell the greatest quantity of these articles.

**Coal Hods** Plain, Striped, Gold-Striped,  
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9 SIZES AND 13 STYLES.

## Stove Boards

Lithographed, in 14 styles and sizes.  
 Crystalized, in 19 styles and sizes.

If you want your goods quickly,  
 order from McClary's.

**The McClary Manufacturing Co.**

LONDON TORONTO MONTREAL WINNIPEG VANCOUVER and ST. JOHN, N.B.

**"Everything for the Tinshop."**



# THE MARITIME BOARD OF TRADE

Tenth Annual Convention, held at Moncton, N.B., August 17, 18 and 19, 1904

A Report of Proceedings Yarmouth, N.S., the Next Place of Meeting.

**T**HE tenth annual meeting of the Maritime Board of Trade at Moncton, N.B., on August 17, 18, and 19, 1904, was a remarkable one in many ways.

This meeting marked the close of the first decade in the board's history and must have been peculiarly gratifying to those who during these years have worked so diligently to bring the business men of the Lower Provinces to a better understanding and a closer unity for the furtherance of common interests.

The meeting at Moncton this year was one of the most numerous attended in the history of the board and the matters considered and passed upon were both many and important. As might be expected the transportation problem in its many phases was the chief consideration of the board, and the practical business insight, the thorough familiarity with detail and the splendid breadth of outlook brought to bear in the discussion of such matters as the "Fast Atlantic Service," and "Steel Ship-building" at once raised the deliberations of the Board to a high plane.

The board is well called "The Maritime." The flavor of the sea permeates its very atmosphere. It is the source of their wealth of the Maritime Provinces, the foundation of their industries and they know it like a book; a slip in nautical information calls down upon the perpetrator the reprimand of some veteran of the seas, stern for the truth.

Senator Josiah Wood, of Sackville, presided at the meetings, which were held in the hall of the Y.M.C.A. building.

## The Convention Opens.

Shortly after 10 o'clock the president, the Hon. Senator Wood, of Sackville, took the chair and called the meeting to order. Before proceeding with the regular routine of business the president had the pleasure of introducing to the members Mayor James T. Ryan, of Moncton.

## Welcomed to Moncton.

Mayor Ryan, on behalf of the City Council welcomed the Board to the city of Moncton. He referred to his city's

interest in transportation, and expressed the conviction that nothing but good could come from the discussion by such a body as the Maritime Board of Trade of the problems relating to inter-provincial trade, railway and water transportation, and other kindred subjects to come under consideration. The visit of any members of the board to Moncton was always welcomed. The hope was further expressed that at no distant date the city might again have the pleasure of welcoming the board. Mayor Ryan's address was received with applause.

## WHERE THEY MET.

Moncton, the scene of this year's Maritime Board of Trade meeting, is a thriving city of 12,000 inhabitants, situated on a bend of the Petitcodiac River 20 miles up from the Bay of Fundy, and formerly known as Moncton-on-the-Bend. The city is the headquarters of the Intercolonial Railway, the road dividing here, one branch running to St. John, and the other to Halifax. It is distinctly a railway city, a large percentage of the population finding employment either on the Intercolonial itself or in the shops in connection therewith. In these shops repairs are attended to, and most of the rolling stock used on the road constructed. The other industries of the city include a foundry and machine shop, an engraving company, a woolen mill and a cotton factory.

The city is also a wholesale centre of some importance, boasting in the possession of two wholesale grocers, one wholesale hardware and one dry goods establishment. Eight or nine handsome churches attest the piety of the inhabitants, while the private residences appear comfortable and home-like. What Moncton chiefly prides itself on, however, is the "Bore." Other cities have bores, but Moncton's never stays long enough to tire one. It hurles itself up the Petitcodiac River twice every day five feet high and at the rate of 10 miles an hour. It is truly a wonderful sight and draws many tourists and sightseers during the summer season.

Already a railroad centre, Moncton exports great things from the Grand Trunk Pacific, which will probably have its terminal here, as well as from the Mackenzie and Mann line, which that enterprising firm are constructing down here. Owing to its favorable situation Moncton is bound to figure largely in the transportation question, as it concerns the Maritime Provinces and may not impossibly be termed the "Railroad City of the East."

## The Roll Call.

The roll was called by the secretary, Charles M. Creed, and a very fair representation found to be present, some delegates from distant points arriving during the day. The list of representatives from the local boards was as follows:

Sackville, N.B.—Senator Josiah Wood, Chas. D. Stewart, J. M. Baird, Prof. W. W. Andrews, Geo. A. Fawcett, A. B. Copp, Thos. R. Anderson, H. C. Read, J. Smith.

Halifax, N.S.—G. S. Campbell, A. M. Bell, J. E. DeWolfe, O. E. Smith, Ed. Stains, A. M. Payne, Alex. Ste-

phen, W. Ross, H. S. Colwell, H. B. Colwell, H. R. Silver, B. F. Pearson, M.P.P.

St. John, N.B.—W. M. Jarvis, J. Hunter White, H. D. Mott, W. S. Fisher, F. H. Bullock.

King's Co., N.S.—Jas. A. Kinsman, C. O. Allen.

Kentville, N.S.—C. W. Webster, M. G. DeWolfe, Wm. Yould, E. J. Ward, B. L. Dodge.

S. Kings, P.E.I.—Fred G. Boyer.

Summerside, P.E.I.—Capt. Jos. Read, J. E. Lefurgey.

Charlottetown, P.E.I.—W. F. Tidmarch, D. Nicholson, S. N. Rattenbury, Geo. E. Hughes.

Wolfville, N.S.—R. W. Starr, J. B. Oakes.

Chatham, N.B.—D. G. Smith, W. S. Loggie.

Amherst, N.S.—B. D. Bent, W. A. Fillmore, W. I. Logan, M.P., J. A. Laws.

Digby, N.S.—C. Jameson.

Newcastle, N.B.J.—D. Creaghan, F. B. Anslow.

Annapolis, N.S.—A. E. Atlee.

Yarmouth, N.S.—E. H. Armstrong, Sydney, C.B.—L. Shaver, A. W. Cruise.

Canso, N.S.—H. A. Rice, Dr. W. A. Morgan.

Alberton and West Prince, P.E.I.—J. C. Birch, H. W. Turner.

Pictou, N.S.—J. D. MacDonald, A. D. Craig.

Souris, N.S.—H. H. Acorn.

Louisburg, C.B.—Wm. Louis.

Moncton, N.B.—F. W. Summer, D. I. Welch, H. H. Ayer, J. Doyle, A. H. Jones, J. H. Harris, J. T. Hawke, P. McSweeney, J. E. Masters, E. N. Carthy.

## Committee on Orders.

On motion of M. G. DeWolfe the minutes of the last meeting being in the hands of the members in pamphlet form were taken as read and the board proceeded to the appointment of a committee to determine the order in which the various subjects proposed by the local boards might be discussed. The committee was selected as follows: W.



S. Loggie, F. W. Summer, Chas. Stewart, W. M. Jarvis, Capt. Jos. Read, F. G. Peyster, H. W. Turner, A. E. Atlee, J. A. Laws, H. A. Rice, C. Jameson, J. P. DeWolfe, Wm. Yould, Capt. C. O. Allen, A. J. Craig, R. W. Starr, C. H. Armstrong, A. W. Cruise.

The committee retired immediately, and the veteran secretary of the board, C. N. Creed, of Halifax, submitted his report, which was as follows:

#### Secretary-Treasurer's Report.

To the President and Members of the Maritime Board of Trade:

Gentlemen, — Your secretary-treasurer begs to herewith hand you his report for the current year. All the various resolutions and recommendations passed at the last annual meeting were forwarded as directed, and copies of important resolutions which required the attention of the Federal and Local Governments were forwarded to the Ministers of the various departments. Copies of the proceedings of the annual meeting as contained in *Hardware and Metal*, of Montreal and Toronto, were forwarded to every board of trade in the Maritime Provinces, as also to the delegates who attended the meeting. At the opening of the Federal Parliament copies of the resolutions were again forwarded to the Minister and the members of Parliament from the Maritime Provinces interested.

The correspondence connected with the same, as also the correspondence with the various boards, being too voluminous to read, are now on the table for the inspection of members.

#### CORRESPONDENCE WITH BOARDS.

This has been steadily kept up, and I have much pleasure in being able to report that the majority of the secretaries have promptly responded to my notices, and the subjects for discussion at the annual meeting have this year been forwarded to the various boards in advance. This is most desirable, as it gives the delegates something to think about, and enables them to come to the meeting prepared to join in the debates on the subjects suggested.

#### ANNUAL REPORT.

As instructed at the annual meeting, I prepared and published a report with the date on which the board was organized, the officers and council for the year, a list of the past presidents, and the places at which the annual meeting had been held each year, and a list of the affiliated and the unaffiliated boards and the by-laws, copies of which were forwarded to all boards of trades in the Maritime Provinces, and circulated generally as occasion presented.

#### NEW BOARDS.

During the year three boards have been formed in Nova Scotia, viz.: Antigonish, Chester and Mahone Bay. Antigonish and Chester have affiliated, and so soon as Mahone Bay gets in working order, I hope to have it affiliated also. The affiliated boards now number 35, the unaffiliated boards now number 12; total, 47.

#### UNAFFILIATED BOARDS.

The unaffiliated boards have had every attention paid them. I have written them frequently and sent them notices of the date of the annual meeting, and asked them if they were not ready to affiliate to send delegates. They seem to be taking more interest in their own boards, and many boards that have been inactive I feel during the coming year will be working with renewed vigor.

I have used my best energies during the past year for the advancement of the board, at the same time doing all in my power to assist your worthy president, in which effort I had the advice and able assistance of Mr. M. G. DeWolfe, of Kentville, and the corresponding secretary, Mr. Chas. D. Stewart, and am pleased to report the result of the year's work has been most encouraging.

#### ACCOUNTS FOR THE YEAR.

The accounts for the year are all prepared, but as several boards will pay their per capita before the close of this



E. K. Spinney, Yarmouth, N. S., President Maritime Board of Trade 1904-05.

day's meeting, they will be presented tomorrow for your approval. All of which is respectfully submitted.

(Sgd.) CHARLES M. CREED,  
Permanent Secretary-Treasurer.

M. G. DeWolfe, in moving the adoption of the report of the secretary, together with the thanks of the board, said he had been in touch with the secretary throughout the year and it was difficult to appreciate the amount of work that had been carried through by Mr. Creed. He had been particularly energetic in stirring up the local boards, and keeping up the interest in the larger body. It was a difficult matter at times to get the local secretaries to answer

communications from the larger board, but he had much pleasure in knowing that much improvement was to be noted in this direction.

W. M. Jarvis had much pleasure in seconding the motion proposed by Mr. DeWolfe. He quite coincided in what the latter had said in regard to the secretary and he was glad to find that Mr. DeWolfe had lost none of his old-time eloquence.

The president, in putting the motion, which was carried unanimously, remarked on the energetic and faithful manner in which the secretary had discharged his duties.

Mr. Creed expressed his appreciation of the kindly feelings of the board and protested he had done nothing more than his duty. He had been secretary of the Halifax board for 43 years and was now superannuated, but not laid on the shelf. He again thanked them for kindness shown and expressed the hope of living to meet them another year.

#### Communications.

A letter was read from the secretary of the Moncton Y.M.C.A. in whose hall the board met, extending to the members the privileges of the association during their stay in the city. The secretary was instructed to convey the appreciation of the board to the Y.M.C.A. for their courtesy.

Letters of regret at not being able to be present were also read from H. W. Kittson, president of the Hamilton Board of Trade; Geo. A. Drummond, president of the Canadian Manufacturers' Association; the president of Ottawa Board of Trade; W. L. Edmonds, Managing Editor the MacLean Trade Newspapers; P. Gifkins, general manager Dominion Atlantic Railway; C. W. Y. Coding, president Portland Board of Trade; and the president of the Montreal Board of Trade.

The president's address was the next order of business, but in the absence of the gentlemen on the committee on orders it was decided to await their return before receiving the address. Discussion naturally turned on the inconvenience of having this committee meet at so late a time and in their absence from the deliberations of the board. Various plans were proposed to obviate the difficulty and on motion of G. D. Smith and A. M. Bell a committee of two was appointed to draft an amendment to the constitution providing that the council of the board should meet an hour or so before



the opening of the session and decide on the order of business. This was considered to be in accord with a notice of motion made at Sidney by Geo. F. Falkner. The president appointed the mover and seconder to constitute the committee.



The Bore, Moncton, N. B.

The committee on orders having now returned, President Wood proceeded with his address.

#### The President's Address.

Gentlemen of the Maritime Board of Trade:

I was not present at the meeting in Charlottetown last year, and embrace this, the first opportunity I have had of thanking you for the honor conferred upon me in electing me to the presidency of this association.

I feel that I should, at the opening of our proceedings, express our appreciation of the courtesy and kindness of the Moncton Board of Trade, and on behalf of the association thank them for the invitation extended us to hold our annual meeting in this city. It is especially gratifying to myself that I was chosen to preside over this meeting. I have watched the growth and progress of Moncton, from a country village to a city, with a great deal of interest and satisfaction. I have been to some extent identified with its interests; some of my most intimate business associates and friends have been among the active and progressive business men of this city, and it affords me pleasure to testify to their energy, enterprise and business capacity, evidences of which are to be seen everywhere around us.

Moncton ranks today among the most progressive cities in the Maritime Provinces. It owes much to its geographical position. Its situation on the bend of the Petitcodiac River fixes it as a railway centre and an excellent point for the distribution of merchandise. These advantages have attracted to it a large share of the trade of an extensive district. It is surrounded on almost every side by extensive areas of fertile farming country, and is the natural market for the products of the farmers. It has advantages for manufacturing in some

respects exceptional. Its proximity to the coal mines, and facilities for transportation by water as well as by rail, ensure cheap fuel. A large portion of the people have a fondness and a special aptitude for industrial pursuits, and a plentiful supply of skilled mechanics and cheap labor is never lacking. Its manufacturing interests are among the most

healthy and prosperous in the Dominion.

I am glad there are so large a number of delegates present from so many different parts of these provinces, and that they will have the opportunity of seeing for themselves the advantage it offers for business, by visiting its different industries and meeting the business men of the city, and I am confident they will be favorably impressed.

I am glad to note that the programme prepared by the Moncton Board of Trade

that there is prospect of this becoming a large and lucrative industry.

#### TRADE OF THE DOMINION.

Before entering upon the discussion of the various questions submitted for the consideration of this meeting, it will not be deemed inappropriate for me to offer some general observations upon the trade of the Dominion.

The official returns show that the total imports for the Dominion of Canada continue to increase, and will for the year ending June 30, 1904, amount to upwards of \$250,000,000, the highest figure reached in the history of the country. The imports will be \$8,500,000 in excess of the preceding year, and more than double the imports of ten years ago. The exports for the year ending June 30, 1904, do not make so favorable a showing. For the first time in many years, (except 1899), they show a slight decrease. The domestic exports for the past year will be \$16,000,000 less than for 1903. They will be about the same as for 1902, and larger than for any of the years preceding. The decrease is largest in the exports of animals and agricultural products, in this item alone amounting to nearly \$12,000,000. There is also a decrease in the lumber exports of about \$2,000,000, and a small decrease of about \$1,000,000 in the products of the fisheries.

Taking the trade of the Maritime Provinces apart from the rest of the Dominion, the imports for the year ending June 30, 1904, amounted to \$22,785,000, an increase over 1903 of \$780,000. This increase is proportionate with the general increase throughout the Dominion, the increase in both cases being about 3½ per cent. Our domestic exports for the last year amount to \$35,400,000. This is a decrease of about \$1,000,000 compared with the exports of the preceding year. The decrease is



Hopewell Rocks, Moncton, N. B.

includes a visit to the oil wells of the New Brunswick Petroleum Co. This is a new enterprise in which several of the enterprising men of this town and neighborhood have embarked, and in which the representative of this county in the Dominion Parliament has taken a special interest. It is very gratifying to be able to state that their operations so far have been attended with success, and

relatively not so large as for the rest of the Dominion. For the whole Dominion the decrease in our export trade was 1½ per cent., while the decrease for the Maritime Provinces was only 2½ per cent.

It will be seen from these figures that the Maritime Provinces have shared in the remarkable increase of trade which has developed throughout the Dominion



within the last few years. Our imports, which for several years fluctuated between \$13,000,000 and \$15,000,000, have within the last five years rapidly risen until they reach this year the total all ready mentioned of \$22,785,000, the largest in our history and an increase over the imports of five years ago of about 50 per cent. Our domestic exports, which were a little over \$18,000,000 in 1894, have gradually increased to upwards of \$35,000,000 in 1904, an increase in the ten years of nearly 100 per cent., viz.: 94 per cent.

It is not prudent for me to attempt a forecast for the coming year. I note, however, that the shipments of wheat from Montreal, since navigation opened this season, are less than half the shipments for the same period last year. The decline in lumber, the low prices now prevailing and the difficulty of finding buyers even at the low prices, will no doubt curtail lumber shipments during the present season. It does not seem probable under present circumstances that our general trade will show better results than it has during the year just closed.

In some respects the trade of the last year has been highly satisfactory, especially so far as Maritime Province interests are concerned. The Winter export trade shows a decided increase. There were 92 steamers loaded at St. John last Winter, and the cargoes they carried away amounted to \$15,745,501, the largest figure reached since this business began. It was an increase over the previous year's business of \$1,907,590, and almost double that of two years ago.

There has also been a very satisfactory growth in our trade with the British West India Islands and British Guiana. The volume of export trade has been maintained. For the year ending June 30, 1904, it is about equal to that of the year ending June 30, 1903, both years showing an export trade of little upward of \$2,630,000. In the import trade there has been a very gratifying increase. The total imports for the year ending June 30, 1903, were \$2,415,608, and for the year ending June 30, 1904, \$4,491,566, an increase of upwards of \$2,000,000. This increase is largely accounted for by the increased importations of sugar from the British West India Islands and British Guiana, a large quantity of sugar having been purchased in these markets which we had hitherto imported from Germany. The official returns show that for the year ending June 30, 1903, we imported from Germany 189,000,000 lbs. of sugar. For the eleven months ending May 31 last, our imports from Germany only amounted to 30,000,000 lbs. From the West Indies our imports for the year ending June 30, 1903, amounted to 94,000,000 lbs., and for eleven months ending May 31, 1904, they amounted to 242,000,000 lbs. This decrease last year in the imports of sugar from Germany of upwards of 150,000,000 lbs. is made up by the increase in the imports from the West Indies and British Guiana, which fully equal that quantity.

It will be remembered that the provisions of our preferential tariff of 33 1-3 per cent. extend to imports from the British West Indies, and also that since April 16, 1903, imports from Germany have been subject to a surtax or duty

of 33 1-3 per cent. in addition to the duty imposed upon imports from other countries. The effect of this tariff legislation has enabled us to purchase this year upwards of 150,000,000 lbs. of sugar in the British West Indies, which we formerly bought in Germany, and furnishes a practical illustration of the influence which preferential duties can exert in directing the course of trade.

#### PREFERENTIAL TRADE WITHIN THE BRITISH EMPIRE.

The question of preferential trade within the British Empire is of great interest and importance at the present time, and it is well to note the trend of public opinion in regard to it. It has received more attention from our press and our public men than any other question during the past year. In Canada there is practically a consensus of opinion on this question. The public press and the leaders of both political parties admit its advantages. Resolutions favoring it have been passed by



Capt. Joseph Read, Summerside, P. E. I., 1st Vice-President Maritime Board of Trade 1904-05.

the principal boards of trade throughout the Dominion. It was the subject which occupied the most time and was most warmly debated at the Congress of Chambers of Commerce which met in Montreal in August last. At that meeting where upwards of 350 delegates were present from every portion of the British Empire representing all its important interests, after a discussion of the subject, a resolution was unanimously adopted: "That in the opinion of this congress the bonds of the British Empire would be materially strengthened and a union of the various parts of His Majesty's Dominion greatly consolidated, by the adoption of a commercial policy based upon the principle of mutual benefit, whereby each component part of the Empire would receive a substantial advantage in trade as a result of its national relationship, due consideration being given to the fiscal and industrial needs of the component parts of the Empire."

In New Zealand legislation has already been enacted giving Great Britain con-

siderable preference and in the Australian Commonwealth. The leaders of both political parties have expressed their readiness to adopt this policy in connection with other sections of the British Empire.

The campaign inaugurated by the Hon. Joseph Chamberlain in September, 1903, in Great Britain, in favor of preferential trade within the British Empire, has been prosecuted since with great vigor and with a fair measure of success. Public meetings have been held which have been largely attended by all classes, indicating the intense interest which the general public feel in the question. In the British Parliament the resignation of Mr. Chamberlain and other members of the Government rendered a reconstruction of the cabinet necessary, but the reconstructed Government declare themselves that they are in sympathy with this general policy, although they are not committed to its details, and do not consider the time has yet arrived for its adoption. Several important resolutions have been moved in the British House of Commons during the present session which have presented the question in different phases, and which have fairly tested the opinion of the House. A resolution which raised the issue directly between the advocates of free trade and free food, and the advocates of preferential duties protective in their character, was introduced by Mr. Morley, and was the most important resolution bearing upon this question brought before Parliament. It was an amendment to the address in reply to the speech from the throne, and read as follows: "That the removal of protective duties has for more than half a century actively conducted to the vast extension of the trade and commerce of the realm, and to the welfare of its population; and the House believes that while the needs of social improvement are still manifold and urgent any return to protective duties, more particularly when imposed on the food of the people, would be deeply injurious to our national strength, contentment and wellbeing."

No person who believed in adhering to the present free trade policy of Great Britain, or who was opposed to placing any duty upon food, could consistently vote against that motion. Yet when the vote was taken the resolution was rejected by a majority of 51, 327 voting against and 276 in favor of the motion. It is worthy of note in this connection that 69 Irish members voted with the minority and against the Government, and Mr. Redmond, the leader of the Irish party affirmed that they did so in pursuance of their general policy of endeavoring to break down the Government in the interest of Home Rule, and that they were not voting upon the merits of the fiscal policy involved.

On the first of August last a resolution was moved by Sir Henry Campbell Bannerman, leader of the Opposition, condemning certain members of the Government for joining an association which was in sympathy with and organized for the purpose of advancing tariff reform. This motion was rejected by a vote of 288 to 210, giving the Government a majority of 78.

The action of the House on these resolutions furnishes a fair test of the attitude of the British House of Commons upon this question, and it is not unfair



to assume that the British House of Commons fairly reflects the public opinion of the people of Great Britain whom they represent.

In the discussion upon the resolution moved by Sir Henry Campbell-Bannerman, Mr. Balfour expressed his adherence to the views he had formerly expressed. He expressed his sympathy with the general policy, even though it involved duties on food, but he thought the country was not yet ready for its adoption. The Hon. Joseph Chamberlain, on the other hand, in the course of the debate, expressed his belief that the time had come for the submission of the question to the people at the polls, that he would welcome an immediate test of public opinion, and felt confident the verdict would be favorable to his policy.

I feel that the action of Canada and New Zealand in granting Great Britain a preference in their markets, the declaration of the political leaders in Australia, the tone of the press throughout the Empire, and the discussions and votes in the British Parliament show that the sentiment in favor of this policy is gaining strength and justifies the conclusion that the time is not far distant when closer trade relations will be established between Great Britain and the other portions of the Empire, and we do not doubt that as the result the trade of Canada with Great Britain will be largely developed and increased to our mutual advantage.

#### TRANSPORTATION.

Another subject which is of the greatest importance to Canada is transportation. Since our last meeting, legislation has been passed to secure the construction of a second transcontinental railway. The object of the Government in passing this legislation is to promote inter-provincial trade and give the west and central portions of the Dominion more rapid and cheaper communication with Atlantic and Pacific seaports. The City of Moncton, in which we are now meeting, has been selected as the eastern terminus of this railway. The hope is entertained by many in the Maritime Provinces that when this railway is constructed, it will be the means of bringing a larger share of the western trade to our seaports. Whatever benefit may ultimately come to us in this way, it is apparent that many years must elapse before the railway can be finished and open for traffic and the benefits hoped for realized. In the immediate future we must base our hopes for the growth and development of this trade upon such facilities as the present systems of transportation may afford us.

The experience of the last few years has proved the value of our canals and inland waterways as means of economic transportation. There have been great improvements in the vessels used upon the Great Lakes in recent years, and great reductions have been made in the rates charged for heavy freight. During the last season, grain was carried from Lake Superior ports to Quebec for 3c per bushel, and the latest quotation I have seen for the present season is lower still, 2½c per bushel from Chicago to Montreal. It is impossible to believe that any railway, even under the most favorable conditions, can compete against these rates for this traffic. The best authorities now place the cost of

carrying heavy freight by rail at from six to ten times the cost of carrying it by water. This large difference in the freight rates in favor of the water routes has in the past, and is at the present time, giving them the principal share of the heavy freight traffic between the east and west, and while the cost of transportation remains so largely in their favor they must continue to practically monopolize the business. It is true that the water routes are only open during half the year, but experience proves that shippers prefer to hold the principal portion of their goods until navigation opens in the Spring rather than pay the high freight rates charged during the Winter season.

#### EXPORT TRADE OF CANADA.

These facts have an important bearing upon the export trade of the St. Lawrence and upon the Winter export trade of the Maritime Provinces as well. Wheat, which is the principal export of the west, will find its way to the seaboard during the Summer months, and



W. S. Fisher, St. John, N. B., 2nd Vice President Maritime Board of Trade 1904-05.

must either go forward by the St. Lawrence route to its destination in Europe or be stored at convenient points for shipment as the market prices warrant during the Winter season. Grain from our Northwest Territories and from the States around and west of Lake Michigan, can to-day be carried from Chicago or Fort William by water to Montreal and Quebec, at a less cost than it can be carried to any other ocean port, and it can under present conditions be stored at Montreal, shipped thence to St. John or Halifax during the Winter season, and delivered free on board there at less cost than in any other way, and at approximately the same cost as it can be delivered free on board by any route at New York, Portland, or any other Atlantic seaport. With greater storage accommodation at Montreal and other convenient points, it is to be hoped that our Winter export trade from the Mari-

time Provinces will continue in the immediate future to show as gratifying an increase as it has in the last few years.

The construction of the Georgian Bay Canal would give this route a still greater advantage. It is estimated that by this direct all-water route, freight from Lake Superior ports to Montreal or Quebec could be reduced to 1½c per bushel, about the same rate now paid to Buffalo. The State of New York has voted \$100,000,000 for the enlargement of the Erie Canal. If that scheme is carried through, the construction of the Georgian Bay Canal will be a necessity in order to enable us to retain the western trade by the St. Lawrence route. I was glad to note that in response to a deputation which waited upon Sir Wilfrid Laurier a few weeks ago, he expressed the opinion that although the time was not opportune for entering upon the work at present, the Georgian Bay Canal must eventually be built.

#### FAST ATLANTIC STEAMSHIP SERVICE.

Closely connected with the question of transportation is the question of a fast Atlantic steamship service. This has been often discussed, and its main features are well known. It is on the list of subjects for discussion at this meeting, and it is not necessary for me to discuss it now. I may, however, remark that under the present contract for this service some improvement may be looked for, but it still is far short of what we have hoped for, and what must be required before we can compete with rival routes and attract to our Canadian route any considerable portion of the travel which now goes to New York. The present contract is with the Allans. It provides for two new steamers on the turbine principle. They are about 10,000 tons register tonnage, have a speed of 17 knots, are expected to make the trip in Summer from Moville to Rimouski in six days, and in Winter to Halifax in six and a half to seven days. These steamers, with the Tunisian and the Bavarian, are to perform the service. The latter are about 10,000 register, have a speed of 14 to 15 knots, and make the trip in Summer from Moville to Rimouski in six and a half to seven days, and in Winter in seven to eight days. The subsidies paid under the present contract are £2,000 sterling per round trip for the new steamers, and £1,000 sterling per round trip for the Bavarian and Tunisian. This is an increase of about \$85,000 on the subsidy formerly paid, which last year amounted to \$170,000. The prospect for a 20 knot service in the near future is not very bright. Sir Richard Cartwright stated in Parliament in July last that the efforts of the Government to obtain a 20 knot service had not been successful. Two tenders only were received. One asking for a subsidy of \$1,000,000, the other for \$1,250,000, and conditions were attached with which it was not in the power of the Government to comply.

#### UNION OF MARITIME PROVINCES.

There are a number of suggestions to which reference might be made if time permitted. Some of these will come up for discussion later on. The question of the union of the Maritime Provinces was brought up at our sitting last year towards the close of the session.



Its discussion was deferred until this meeting. It is not a new question. It will be generally admitted that a legislative union of the Maritime Provinces is desirable both in the interest of economical Government and in order to enable those provinces to retain in the future their legitimate influence in the councils of the country. It is in the adjustment of details that differences of opinion naturally arise.

#### THE ADMISSION OF NEWFOUNDLAND INTO THE CANADIAN CONFEDERATION,

is an equally important question. The desirability of consolidating under one government British interests in the northern portion of the American continent will not be questioned. During the past year the French shore question has been settled. In return for some concessions by Great Britain in connection with disputed territory in Africa, the French have relinquished their treaty rights on the Newfoundland coast. This terminates a condition of things which was a hardship and constant source of irritation to the people and detrimental to the progress of the colony, and one of the barriers to its union with our Dominion. Experience shows, however, that the ultimate accomplishment of such desirable objects as the legislative union of the Maritime Provinces and the union of Newfoundland with our Dominion is attended with difficulties which will require patience and statesmanship to overcome. If any action of this board can hasten their consummation, it will do Canada a useful service.

#### RUSSO-JAPANESE WAR.

I will bring my remarks to a close by a very brief reference to the most notable event of the year, the war between Russia and Japan. This has proved to be one of the greatest conflicts of modern times. It has already been the cause of an enormous sacrifice of life and destruction of property. It has not yet affected Canadian interests to any appreciable extent, nor has it had any very marked effect upon the commerce of Great Britain or other nations of the world. Its result must, however, have an important influence upon the future development of trade and commerce in the distant east, and its progress is being closely watched by the statesmen and leading men in commercial life in Europe and America. Fortunately, nothing has up to the present time occurred to involve any other nation in the strife, and it is to be hoped that it may be terminated, and that peace may be established on a satisfactory and permanent basis at an early date.

JOSIAH WOOD, President.

W. M. Jarvis was sure there was but one feeling in the meeting, namely that they were deeply indebted to the president for his address and for the able way in which he had dealt with the subjects to be brought before the board. He thought the address should be referred to a committee to deal with and he therefore moved "that the thanks of the board be given the president for his valuable address, and that it be referred

to a committee to report as the first matter for consideration at the evening session.

The motion was seconded by J. E. DeWolfe and the committee was made to consist of the mover, seconder and M. G. DeWolfe, of Kentville.

For the benefit of the reporters M. G. DeWolfe requested that each speaker on rising should give his name and board. Mr. DeWolfe also drew the attention of the board to the fact that Hardware and Metal had again sent one of their editors to report in full the proceedings of the board. This, he said, showed in what respect the board was held and the interest taken by Hardware and Metal in the affairs of the Maritime Provinces.

The report of the committee on orders was now received, the order of subjects



Chas. M. Creed, Halifax, N.S., Permanent Secretary Maritime Board of Trade, 1904-05.

to be discussed as laid down therein being as follows:

#### Subjects for Discussion.

1. Dumping clause in recent tariff changes—Halifax Board.
2. The Acts of Nova Scotia with reference to the protection of forests against fires—Annapolis Board.
3. Better export facilities on Intercolonial Railway—Antigonish Board.
4. Improved Express Service accommodation over the Intercolonial Railway—Canso Board.
5. Daily Steamer between St. John, N.E., and Digby—Digby Board.
6. What is the most advantageous way to advertise the resources of the Maritime Provinces, whereby a desirable class of British emigrants may be secured and retained as permanent citizens—Kentville Board.

7. Minas Basin Steamboat service—Wolfville Board.

8. Marine Insurance rates—Louisburg, C.B. Board.

9. Prince Edward Island communication for Winter via Cape Tormentine—Sackville Board.

10. Whereas municipal corporations in the Province of New Brunswick have been applying for and obtaining authority to impose a license fee upon mechanics and laborers working within and residing outside the municipality.

Therefore resolved that in the opinion of this Board of Trade, such legislation is not in the best interest of the Province, and that such power should not be granted to municipal corporations—Moneton, N.B., Board.

11. Circularizing merchants through the Maritime Provinces as to the amount of fire insurance carried by them on their stock—St. John, N.B., Board.

12. Subsidy for Steamer to ply between ports on North Side P.E.I., the Magdalen Islands and North Sydney—West Prince, Alberton, P.E.I., Board.

13. Whereas Lobster hatcheries have proven to be of great value in conserving our fisheries; Resolved that in the opinion of this Board it is advisable in order to preserve the Lobster fisheries, that hatcheries be established along the coasts of the Maritime Provinces at such places as will enable the spawn of lobsters caught for canning purposes all to be collected and hatched—Southern Kings, Montague, P.E.I., Board.

14. The adjustment of freight rates between points on the P. E. Island Railway and points on I.C.R., making through rates instead of what is practically three short haul rates as at present, Winter and Summer, both ways—Charlottetown, P.E.I., Board.

15. Necessity of an open port at Sydney for the shipment of coal and steel at all seasons and means of obtaining same—Sydney Board.

16. The Dog Fish pest—Digby Board.

17. Steel Shipbuilding—Halifax Board.

18. Should the Intercolonial Railway be double tracked and improved—Wolfville Board.

19. Extension of the Intercolonial Railway from Sydney to Louisburg—Louisburg, C.B., Board.

20. Most practical way to spend Government appropriation for the encouragement of agriculture—Sackville, N.B., Board.

21. Making it compulsory for packers



to have weight of contents stamped on package—St. John, N.B., Board.

22. Requesting the Quebec Steamship Company, the Dobel Line, and other steamship lines running to Summerside, to land their freight at the railway wharf thus saving truckage and wharfage—West Prince, Alberton, P.E.I., Board.

23. Protection of Wool Industry—Southern Kings, Montague, P.E.I., Board.

23 1-2. Publication of advertisements in reference to undesirable investments—Digby Board.

24. Fast Atlantic Service—Halifax Board.

25. Purchase of historical places in Maritime Provinces—Wolfville Board.

26. Better Mail service—Louisburg, C.B., Board.

27. 33 1-3 per cent. preferential rebate only applying when goods are imported through British ports—St. John, N.B., Board.

28. Exchange on cheques between banks and their agencies in the Maritime Provinces—Halifax Board.

29. Government ownership of cables and telegraph lines—Halifax Board.

#### The Dumping Clause.

A. M. Bell, on behalf of the Halifax board began the discussion on the dumping clause of the new tariff by moving the following resolution, which was seconded by J. E. DeWolfe.

"That in the opinion of this meeting the recent tariff legislation known as the 'dumping clause' is in its present form detrimental to the interests of trade and should not be put in operation till fuller information is secured and details for carrying it into effect perfected."

Speaking to his motion Mr. Bell briefly outlined the provisions of the "dumping" clause, instancing cases to show its working. He complained that the details had not been worked out before the clause was put in operation, as a result of which business men were not in a position to know what to expect, each custom officer placing a different interpretation on the clause. Things were thus in a chaotic state and the matter of trade discounts was instanced as a case in point. It was essential that the word dumping be defined, and where men were engaged in legitimate trade they should be protected from annoyance, imposition and uncertainty. He had addressed Mr. Fielding on the matter and the reply was that we must rely

on the intelligent administration of the law by the officials. This, said Mr. Bell, was the last thing in the world to expect from the gentlemen of the customs, who, appointed for political reasons, were not familiar with the ways of trade.

Senator McSweeney thought the little difficulties would soon work themselves out.

J. E. DeWolfe, in seconding Mr. Bell's motion, urged that there were radical differences of interpretation among customs officials. Distinct instructions should be given so that such diversity would be impossible.

W. S. Loggie thought there was no more friction than is usual in such cases. He did not think there was any change in the way of treating trade discounts.



C. H. Armstrong, Yarmouth, N.S., Corresponding Secretary Maritime Board of Trade, 1904-05.

If they were genuine and not special they would be allowed.

J. A. Laws favored the dumping clause and showed in the case of carriages how it operated to protect Canadian manufacturers from unfair competition.

John D. MacDonald, of Pictou, remarked that the manufacturer viewed the clause one way and the importer another. It was designed to protect the manufacturer and seemed to be doing it. To say it should not be put in force because of a flaw here and there was not the thing. They should impress upon the Government rather the importance of making their instructions more clear and definite.

J. E. DeWolfe explained that he was strongly in favor of the clause but that the system of enforcing it was erroneous.

Capt. Jos. Read was of the opinion that the way to perfect the clause was to put it in operation. Set a piece of machinery in motion and you would soon find the hot places.

Las. E. Birch declared he was in favor of the clause, if intelligently enforced; but this was not the case now.

C. Jameson disagreed with the last speaker. New laws always brought differences of opinion. Lawyers differed. These matters could only be settled by rulings made by the department as cases came up.

J. B. Oakes recognized that the importer labored under a hardship but thought the motion should take the form of a request for adequate information and instruction as soon as possible on the dumping clause.

I. S. Campbell moved in amendment, seconded by John D. MacDonald:

"That in the opinion of this meeting the recent tariff legislation known as the dumping clause, as at present administered, is in some respects detrimental to the interests of trade and the customs department is hereby requested to immediately make such necessary changes in the administration of the law as will remove all unnecessary restrictions to trade."

Mr. Bell complained that the amendment did not cover the point at issue. The department were making what haste they could now, but in the meantime the importer might be mulcted owing to a difference of opinion among customs officers.

The discussion was continued by J. Hunter White, E. N. Carthy, J. E. Lefurgey, J. T. Hawke, C. D. Stewart, C. H. Armstrong, T. R. Andersen, Capt. Jos. Read and Wm. Yould.

On being put to a vote the amendment carried and was made unanimous on motion of the mover and seconder of the original motion, Mr. Bell remarking that he favored the amendment except that it was not strong enough. They had put too much water in the whisky.

The board now rose for noon.

#### The Afternoon Session.

Between half past two and three o'clock the board re-assembled, and additional members having arrived the business of the day was taken up with



renewed zest. The first subject on the list ready for discussion was

### St. John, Digby, Daily Line.

The matter was brought before the board by C. Jameson, of Digby, who on introducing the subject, referred to the number of times it had previously been presented to the board. He urged the members to remember their motto "Unite and Work." They now had a service of 124 trips during the year and for a pro rata increase could have it increased to 13 trips, giving a daily service with the exception of Sundays. The increase in traffic made the service very necessary. He therefore moved that: "Whereas, the increased requirements of commerce in the southwestern section of Nova Scotia coupled with those of the Annapolis Valley demand greater transportation facilities and in particular a daily mail passenger and freight service between St. John and Digby, N.S., which it is understood the D. A. R. Co. will operate for a pro rata increase in the subsidy now paid.

"Resolved: that the Maritime Board of Trade urge the Federal Government to provide daily steamboat communication between St. John and Digby by granting such pro rata increase in such subsidy; further resolved, that as the four previous requests of this board for an improved bay service have been overlooked by the Government, the present be submitted with the respectful request that it be dealt with immediately."

J. E. DeWolfe declared that to the best of his recollection this project had never been endorsed on account of the excessive subsidy demanded by the railway.

J. H. Armstrong, of Digby, in seconding the resolution, stated that the business men of Yarmouth were entirely in accord with the resolution. Accommodation was required for the increased traffic. The amount of the subsidy was a matter of detail.

M. G. DeWolfe outlined the history of the movement for a daily line. It had been started in Middleton, and Digby and Yarmouth were to blame in not having this improved service before. Improved facilities were required by the increase of freight, passengers and mail.

W. M. Jarvis for St. John was most anxious to develop their relations with all parts of the provinces. There was no opposition to the project from Halifax. St. John and Halifax always treated each other fairly. There were difficulties in the way. It had not been

found easy to deal with the D.A.R. Co. If you gave them an inch they wanted a mile. But the present state of affairs was awkward in Winter. They should do all they could but not press the matter so that the Government would be at the mercy of the D.A.R. Co.

J. E. DeWolfe concurred in that there was no opposition from Halifax. The D.A.R. had been demanding an excessive amount. He thought pro rata reasonable and would support the resolution.

W. S. Fisher of St. John, though pro rata hardly sufficient.

The resolution was adopted.

### Forest Fires.

"Whereas, at the last session of the Nova Scotia Legislature, in the Act for the protection of woods against fires, provision was made whereby the Gov-



M. G. DeWolfe, Kentville, N.S., Auditor Maritime Board of Trade, 1904-05.

ernor-in-Council might appoint chief forest rangers whose duty it was to enforce the provisions of said Legislature, and

"Whereas, the Act has been made ineffective in many counties owing to the fact that the municipality having to make provisions for the salary of said official has declined to make any recommendation to the Government for the appointment of such an official or has openly opposed such an appointment, and

"Whereas, in the opinion of this board the subject is of sufficient importance to justify the Government in making said appointment in every municipality, and whereas, in the opinion of this board it would be advisable

to replant the burnt districts for the beneficial effect such replanting would have in increasing the welfare of the people.

"Therefore, resolved: That the Government of Nova Scotia be asked to forthwith make said appointments in the municipalities where none have already been appointed, and

"Further resolved, that the Government of Nova Scotia be asked to take into consideration the advisability of replanting such portions of the burned districts as may be found practicable."

The above resolution was introduced by A. E. Atlee, of Annapolis. His section, he said, was much interested in the manufacture of lumber and had suffered much from fires. The question affected not only the lumber districts but all parts, even the fruit and fish men depending for their packages on the lumber industry. The increase in fires would be a disaster to all. They had a good law but no machinery to enforce it. He asked the support of the board in favor of this resolution.

J. B. Oakes, of Wolfville, seconding the motion, emphasized the need not only of protection against fires but of re-forestation. No subject brought before the board was of greater importance, and he instanced the evil effects that had come to some parts of Europe through poor treatment of their forests similar to what was going on here. New Brunswick was even more vitally interested than Nova Scotia. Already he had seen great tracts reduced to barrenness on account of forest fires. The climatic effect of forests was most important. Streams, temperature, floods, droughts and late Springs were all related to the depletion of the forests.

The most effective way of preserving the forests was the diffusion of knowledge. Re-planting would pay and pay handsomely, as it was doing in Germany.

W. M. Jarvis, of St. John, seconded by W. S. Loggie, of Chatham, moved a rider that "The Government of New Brunswick be also requested to take into immediate consideration the extension of the Nova Scotia forestry system as well as the provision recently enacted for the County of Westmoreland, over the whole of the Province of New Brunswick.

C. D. Smith, of Chatham, informed the Board that New Brunswick already had a stringent law against fires, and had special guardians of the forests in their



fishery guardians, who filled this double office.

Prof. Andrews, of Sackville, expressed his pleasure at finding this subject brought before so many business men. In Ontario they had a law so effective that even the Indians would put out their fires before breaking camp, and the result had been eminently satisfactory. He explained the Westmoreland fire law and said that already a new realization of responsibility was prevalent. In his university they had a course of lectures so that their students might go out imbued with an appreciation of the value of the forests. The city of Paden in Germany paid part of their taxes with the profit from their timber lot.

B. H. Dodge, of Kentville, N.S., objected that in his county the owners of the forests had got them very cheap, and it was not right that the people should pay to protect these private rights. The owners should at least pay the greater part of the expense.

The resolution with rider was adopted.

#### Minas Basin Steamboat Service.

J. B. Oakes, of Wolfville, moved, seconded by J. E. DeWolfe, of Halifax, that,

"Whereas subsidies have been provided for carrying into effect a more effective steamer service between Parrsboro, Kingsport and Wolfville, and whereas Wolfville has not yet been included in this service in consequence of the damage last Spring to the new wharf near the mouth of Mud Creek,

"Therefore resolved that this Board express its appreciation of the building of the wharf and the granting of subsidies to render the service possible, as also of the recent vote of \$6,000 for the reconstruction of said wharf.

"Further resolved that this Board urge upon the Department of Public Works the necessity of an early reconstruction of this pier, and recommend, if found practicable that Mud Creek be deepened by a Government dredge, in order to render transportation to and through the port of Wolfville less difficult, thereby increasing the volume of trade between the several cities and towns interested in this service."

Mr. Oakes urged that this was not a mere local matter but would redound to the good of trade in all the central part of the provinces.

Mr. DeWolfe believed that as the pier was there it should be made as serviceable as possible without delay.

The board concurred.

#### Coasting Laws.

Mr. Louis, of Louisville, complained of the ill condition of our shipping due to the coasting laws under which we live and asked for a committee to draft a resolution on the matter.

The request was granted and a committee appointed as follows: Capt. Louis, Capt. Allen, Capt. Read.

#### The Tormentine Route.

A lively discussion developed from the motion brought in by Capt. Anderson, of Sackville, declaring that in the opinion of the convention the most feasible route for Winter communication between

the people labored under without this service.

Fred D. Boyer, of Georgetown, spoke strongly against the resolution.

John E. Birch, Alberton, asked for a fair trial of the Tormentine route. Till late Fall and up till February there would be very little difficulty.

Geo. E. Hughes, Charlottetown, did not think the board were in a position to dictate to the Dominion Government how they were to carry out their contract with the island. He contended the scheme proposed had been tried and failed. It was not suitable for freight. He disputed Capt. Read's assertion that the people of the island thought the Tormentine route the best.

N. Rattenbury had no prejudice against the Tormentine route, but the freight rates were against the route.

Wm. Yould, Kentville, asked if the delegates from the island were not agreed on the route how could the board be expected to instruct the Government?

The Hon. Wm. Ross, Halifax, believed the matter could safely be left to the representatives of the island in the Dominion parliament. No part of Canada was better looked after than Prince Edward Island, and last year the mail and freight service had been a wonderful success.

The Hon. Senator McSweeney urged the necessity of uniting before results could be expected.

M. G. DeWolfe advised that the resolution be withdrawn.

A. B. Copp claimed great advantages for the Tormentine route.

Mr. Hughes protested that there was no jealousy of Summerside on the part of Charlottetown, but the facilities and rates by this route were not inviting.

Capt. Read retorted that there was no more jealousy between Charlottetown than there was between St. John and Halifax. (Laughter.)

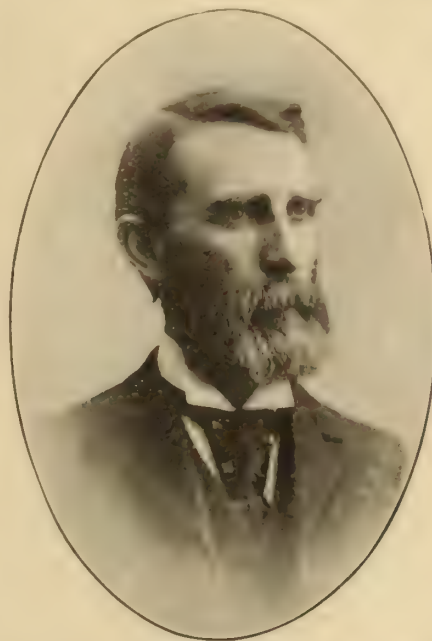
Geo. A. Fawcett gave his experience in shipment of cattle to and from the island. From this he favored the Tormentine route.

John D. MacDonald, of Pictou, moved in amendment that from the information before them at present the board should not make any further recommendation to the Government.

The amendment was carried.

#### The Preferential Tariff.

St. John's preferential tariff resolution was moved by W. S. Fisher, who was very brief, as he wished the board



Hon. Senator Wood, Sackville, N.B., Retiring President Maritime Board of Trade.

Prince Edward Island and the mainland would be between a point on the southern coast of said island at or near Carleton Head and Cape Tormentine at the extreme easterly point of New Brunswick, and asking that the Dominion Government be memorialized to provide a pier and safe terminal facilities at said Carleton Head on Prince Edward Island, and as soon as possible have a steamer put on the said proposed Cape Tormentine and Carleton Head route.

Capt. Jos. Read seconded the resolution and explained how the action of the tides kept the ice open at this point part of nearly every day throughout the Winter. He made a strong plea for this resolution, showing the disadvantage



to hear H. J. Logan, M.P., of Amherst, who had given the matter his especial attention.

The resolution, seconded by G. S. Campbell, of Halifax, read as follows:

"Whereas, under our present tariff the preference of 33-1-3 per cent. on British goods applies to merchandise imported via foreign ports as well as to goods coming direct through Canadian ports, and in consequence of this a very large proportion of goods destined for Canada under this law is received through foreign ports to the detriment and loss of Canadian commerce.

"Resolved, that the Government of Canada be asked to apply the rebate only to goods coming direct to Canadian ports so that our ports and transportation companies may be built up by the business of our country."

Mr. Logan believed the resolution should commend itself to the men of the Maritime Provinces, confining as it did the effect of the preferential tariff to goods coming through Canadian ports. Last year we imported \$15,000,000 in British goods through Boston that should have come through St. John or Halifax. Shipping companies complain of the difficulty in getting return cargoes. Such a provision would meet the situation. The United States could not object as we would be but following their example in their coasting laws, which were shutting out Costa Rica and the Philippines from the commerce of the world. We should be Canadians first, last and all the time and be loyal to the interests of our country.

J. E. DeWolfe expressed the feeling that the board lay under an obligation to Mr. Logan for his fine address. He hoped the resolution would have the unanimous support of the board.

The Hon. Senator McSweeney contended that imports came through the United States because of cheaper freights. The proposal would hamper trade.

Capt. Reid, speaking as an old sailor, former shipbroker and now a shipper, believed the freight question would be solved by this proposal. Freights were high because loads could be got only one way. He believed we could divert this trade to our ports just as New York had diverted trade from Baltimore.

The resolution carried.

#### The Evening Session.

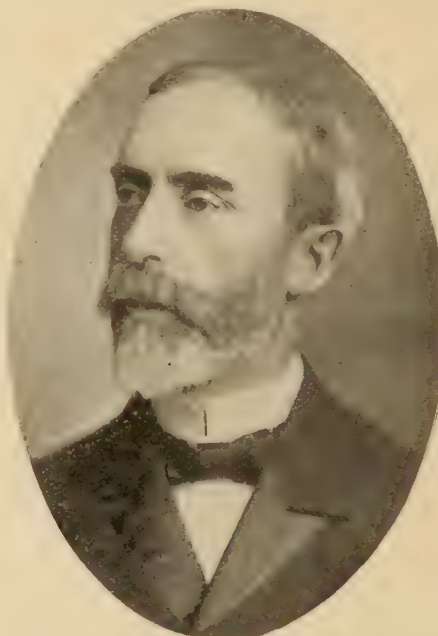
On resuming in the evening D. G. Smith, on behalf of the committee appointed at the morning session to draft

an amendment to the constitution covering the fixing of the order of business, moved the following resolution:

"That by-law three be amended as follows: Subjects for consideration at the annual meetings and resolutions dealing therewith shall be forwarded to the secretary at least twenty days prior to the date of the annual meeting and the secretary shall have them printed and distributed to the local boards at least ten days before the date of such meeting; and the council of the board shall arrange the order in which the subjects may be discussed, so that they may be dealt with at the opening of the annual meeting.

The amendment was lost.

W. M. Jarvis, Halifax, as convenor, reported that the committee appointed



Horace Haszard, M.P., ex-President Maritime Board of Trade.

for the consideration of the president's address had much pleasure in recommending that the warm thanks of the board be given the president for his valuable address and the important information contained therein, and further,

That the president be requested to furnish the board with a copy of his address and that the same be published under direction of the council with the annual report of the board.

Seconded by J. E. DeWolfe the report was adopted.

The president thanked the board for this compliment and said he was happy to have done anything that had contributed to the object for which they had met.

A. M. Bell moved and G. S. Campbell seconded that hereafter time devoted to any subject except with the permission of the board be one-half hour and speeches be limited to five minutes.

It was moved in amendment that the rules allowing 10 minute speeches be adhered to.

The amendment carried.

#### I. C. R. Express Service.

The discussion over the express service on the I.C.R. was decidedly interesting. It was participated in generally, and at times narrowly escaped being heated. The question was brought up by H. A. Rice of Canso, moving as follows:

"Whereas, under the Railway Act all express companies may have same privileges over all railways in Canada except over the Interecolonial railway, and

"Whereas, under the contract between the Government and the Canadian Express Co. paragraph 15 stipulates that this agreement is subject to the condition that equal facilities and equal terms shall and may be granted to any or all express companies which may contract with His Majesty for the conduct of an express business over said railway, or any part thereof, and

"Whereas, over the I.C.R. railway between Montreal and Moncton, and from Truro eastward in Cape Breton and in P.E.I., there is only one express company permitted to do business, and

"Whereas, the shippers of fish and other merchandise from Eastern Nova Scotia and P.E.I., and shippers of fruit from Western Canada to points on I. C.R. east of Truro are handicapped by being shut out from a competing express service and compelled to pay extra rates of carriage and

"Whereas, numerous resolutions have from time to time been addressed to the Government asking that Dominion Express Company be granted same privileges over Government railways as are granted to Canadian Express Company,

"Therefore, resolved that this Maritime Board of Trade endorses said resolutions and urges upon the Government the early granting of said express privileges to other companies than that one now having the monopoly of the express business.

"Further resolved, that copies of this resolution be forwarded to Minister of Railways and Canals, Minister of Finance and Maritime members at Ottawa."

The resolution was seconded by J. E.



DeWolfe, of Halifax. Thirty similar resolutions had been forwarded to the Government. The agreement with the company provided for granting equal privileges to others and he had correspondence from fruit and fish men all over the province supporting the resolution.

E. D. Smith, M.P., Winona, Ont., a fruit grower of that province, said that last Winter a resolution was passed asking the Government to put the system upon the road as is now on a portion of it. These resolutions were taken before the Minister of Railways. They were cordially received and the Minister promised to take the matter into consideration. He suggested that objections might be raised and these objections have been raised by the company having the monopoly over the Maritime Provinces. The first argument is that the I.C.R. will lose some portion of its revenue through employing extra ears. But the Dominion Express Company has guaranteed the Government that there shall be no loss of revenue. The other argument is that it will derange the system, through the increased traffic. This is exactly what the I.C.R. wants and its able management will be able to distribute it without any loss of revenue. This is a Government road and ought to be available to all who wish to take advantage of it. The fruit growers, Mr. Smith said, felt very earnest about this.

John T. Hawke said that we were told that this question means merely competition for the Maritime Provinces. It was a well known fact that there was a cast iron agreement between these two express companies in regard to rates, and that allowing them to compete on the I.C.R. would not cause the lowering of the rates one dollar.

If, he said these gentlemen really wish competition, they would have no objection to the following rider which he moved:

"That this only be granted on condition that the C.P.R. give other express companies equal running right over their line with the Dominion Express Co., in the Maritime Provinces and Quebec."

Senator McSweeney seconded the amendment.

J. E. DeWolfe spoke at some length on this question and could not see why the two express companies could not be granted equal rights on the I.C.R. He produced letters from many fruit im-

porters of the East, and fish shippers, agreeing with the motion and giving their assent and support to the proposal. Mr. DeWolfe said that it was not the Dominion Express Co. who were asking for these privileges, but the fish shippers of Nova Scotia, and the fruit growers of Ontario.

A. Shaffer, of Sydney, said he could not see why any business man should oppose this proposal. It was a privilege which every man should vote for, as it would bring revenue into the lower provinces.

Mr. DeWolfe, Kentville, wished to know what was behind this, to keep any man from voting for this resolution.

A. W. Cruise thought there was something behind this, but it was on the other



W. A. Black, ex-President Maritime Board of Trade.

side of the fence. He said that there was no complaint of the express service at Sydney. This board was no doubt canvassed by the C.P.R.

Mr. Jarvis, St. John, had a resolution adopted by the St. John Board of Trade, urging the Government to grant to all express companies equal rights and privileges on all Government railways. Competition, he said, wakens everybody up and was a good thing for the public.

J. E. DeWolfe took exception to Mr. Cruise's remarks and said the Halifax board was not canvassed by any express company.

J. T. Hawke said that articles had been published in the Halifax newspapers, purporting to be public opinion

in favor of this question. These, it is understood, were really accepted and published as advertisements, and not as an unsolicited expression of opinion. Continuing, the speaker said that his amendment did not oppose the spirit of the resolution, but aimed to give the so-called benefit of competition to the oppressed people of the St. John Valley.

W. S. Loggie, Chatham, could not see what benefit could be obtained by two express companies.

Capt. Read, Summerside, said there were only two express agents on the whole island and they were shamefully careless. He thought the P.E. Island Railway should be put on the same basis as the I.C.R.

H. H. Acorn, Souris, P.E.I., said that more express privileges were needed on the P. E. Island Railway, as well as an increase in the number of express offices.

The amendment was lost and the original motion carried.

F. W. Sumner, president of the Moncton Board of Trade, announced that it was the intention of the local board to entertain the delegates to a trip to the Memramcook and St. Joseph oil fields, leaving the station at 8.30. All were cordially invited.

The invitation was accepted.

#### To Secure Emigrants.

The Kentville Board of Trade raised the question of "What is the most advantageous way to advertise the resources of the Maritime Provinces; whereby a desirable class of British emigrants may be secured and retained as permanent citizens."

The question was put forward by Capt. Allen and seconded by M. G. DeWolfe.

The latter said that in the Annapolis and Cornwallis Valleys they were much handicapped through lack of help. They needed a good class of emigrants. The trend was westward; streams passed through Halifax and never stopped in the lower provinces. In his district they had got out some illustrated pamphlets portraying the advantages of the Valley but if they were to keep up their industries in the Maritime Provinces they must unite in this work. He hoped some practical suggestions would be brought out.

W. S. Fisher, of St. John, agreed that there was a need for more people. The conundrum was how to get them. He believed something might be done by



preparing literature for circulation in Britain through the immigration officers.

G. S. Campbell concurred in what Mr. Fisher had said. A book should be prepared telling the advantages of the Maritime Provinces. These should be distributed to prospective immigrants.

C. Jameson moved the matter be referred to a committee of five to devise a scheme and report before the board adjourned.

D. G. Smith seconded the amendment.

J. E. Birch said the root of the difficulty lay in the fact that the young men went to the United States.

Capt. Read inquired what was the use of bringing people from outside when they could produce better at home. He said the C.P.R. were taking young men to the Northwest for \$10 and charging them \$20 to come back. He thought that should be prohibited.

The amendment was carried and the president named the mover, seconder, Capt. Allen, Mr. Dodge and Mr. Fisher as the committee to report on the matter.

#### Steamer to Magdallens.

J. E. Birch, Alberton, introduced the subject of a subsidy for a steamer to ply between ports on the north side of Prince Edward Island, the Magdallen Islands and North Sydney. The distance of the whole route is about 625 miles. Mr. Birch moved that a subsidy of \$200 per trip be given for this steamer to ply a weekly service between Prince Edward Island, Miramichi, Sydney and the Magdallen Islands.

The motion was seconded by H. H. Turner, West Prince, and carried.

#### Lobster Fishing.

"Whereas lobster hatcheries have proven to be of great value in conserving our fisheries: Resolved, that in the opinion of this board it is advisable in order to preserve the lobster fisheries, that hatcheries be established along the coasts of the Maritime Provinces at such places as will enable the spawn of lobsters caught for canning purposes all to be collected and hatched."

The above resolution was introduced by F. G. Boyer and C. Jameson, both speaking strongly on the matter and pointing out how the lobster fisheries have been depleted.

A. W. Bell inquired whether it were illegal to can seed lobsters.

Mr. Boyer said it was, but it was done nevertheless.

W. S. Loggie, Chatham, moved as a rider that the Government be asked to prohibit the fishing of lobsters by "curleys" as these "curleys" are fished close to the shore and only small lobsters are taken.

Hon. Wm. Ross thought we should make every effort to improve our lobster fisheries.

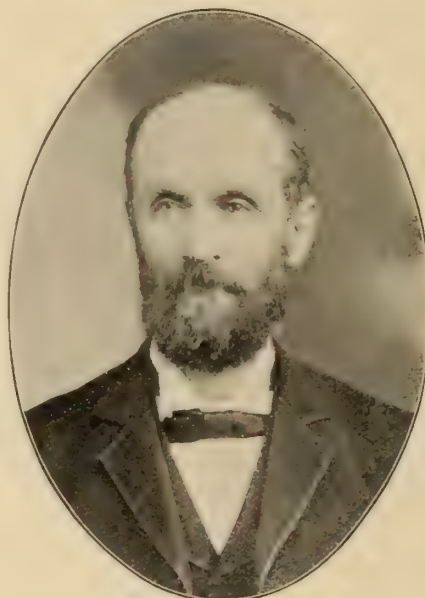
The motion was carried.

On motion of A. M. Bell it was decided to appoint a committee to report on the names of officers for the coming year.

The committee as constituted by the president's nomination were the mover, the seconder and Messrs. DeWolfe, Jameson and Loggie.

#### To Meet at Yarmouth.

A letter was read by the secretary



W. S. Loggie, M.P.P., ex-President Maritime Board of Trade.

from the Yarmouth Board of Trade inviting the board to make Yarmouth its next place of meeting.

On motion of W. S. Loggie, seconded by J. E. DeWolfe the invitation of the Yarmouth Board of Trade to meet in their town next year was accepted.

#### A Field Day.

The board took Thursday off and as the guests of the local Board of Trade enjoyed a delightful trip to the Dover and St. Joseph oil fields now being developed.

It threatened rain in the morning, but despite this most of the delegates, together with a large number of Moncton business men, in all a party of about 200, boarded the special train at 8.30 in the morning and were soon landed at the quaint little village of Memramcook

in the centre of the beautiful Memramcook Valley.

The party were met at the station by the farmers of the vicinity and driven through the valley around to the Dover wells, where the pumping station and boring rigs as well as the wells themselves were inspected, the party coming away impressed with the bright prospects of this field.

From here the party were driven around to St. Joseph College, where they were given a most hearty welcome by the Rev. Father Cormier and the young ladies of the village who had volunteered to assist in extending the hospitality of the college to the visitors. Dinner, which was served immediately, reflected the highest credit on the menage of the college and gave the greatest satisfaction to the hungry visitors. The afternoon was spent inspecting the college buildings and grounds and the oil wells situated thereon. A special attraction was the shooting of one of these wells with nitro-glycerine, a sight seldom witnessed by any present. A further demonstration of the power of this explosive was given by setting off a can that had been nearly emptied. The detonation was tremendous and signally impressive.

The train met the party at college bridge, but before returning a hearty vote of thanks was passed to Rev. Father Cormier who had proved himself the "Prince of Hospitality" and to the young ladies who had volunteered their assistance for the occasion.

#### Next Year's Officers.

On resuming in the evening after returning from the oil fields the board immediately received the report of the nominating committee appointed the previous evening. The report was presented by C. Jameson and recommended the following gentlemen for the respective offices:

President—E. A. Spinney, Yarmouth.  
1st Vice-President—Capt. Jos Read, Summerside.

2nd Vice-President—W. S. Fisher, St. John.

Permanent Secretary-Treasurer—C. M. Creed, Halifax.

Corresponding Secretary—C. H. Armstrong, Yarmouth.

Auditor—M. G. DeWolfe, Kentville.

On motion of Messrs. Bell and Smith nominations were closed and the secretary instructed to cast a formal ballot for each gentleman on the list proposed



by the nominating committee confirming their election.

J. E. DeWolfe, as chairman of the committee on orders, asked that a question proposed by the Charlottetown Board of Trade as to the best means of developing the fisheries of the Maritime Provinces and inadvertently omitted, be added to the list. The request was granted.

#### Immigration.

Capt. Allen, chairman of the committee appointed to consider the question of securing immigration to the Maritime Provinces, moved:

"That in the opinion of this board the Governments of Nova Scotia, New Brunswick and Prince Edward Island should co-operate in the publication and distribution in Great Britain and Ireland, among a desirable class of prospective emigrants, of literature, showing the advantages offering to settlers in the Maritime Provinces of Canada; and that committees consisting of three members of this board from each of such provinces be now appointed to bring the subject before the respective Governments."

Speaking to the resolution Capt. Allen emphasized the need of immigrants, especially in Nova Scotia, which had been behind New Brunswick in this matter.

The resolution was seconded by C. Jameson, who added the suggestion that the local boards supply the committee with pictures illustrating the attractions of their several districts.

The resolution was carried unanimously and the appointment of the committees left to the president, who named the committees as follows:

New Brunswick—W. M. Jarvis, St. John; Hon. Senator McSweeney, Moncton; D. G. Smith, Chatham.

Nova Scotia—G. S. Campbell, Halifax; C. Jameson, Digby; Dr. W. B. Moore, Kentville.

Prince Edward Island—N. Rattenbury, Charlottetown; J. E. Lefurgey, Summerside; H. H. Acorn, Souris.

Capt. Wm. Louis, of Louisburg, felt that the shipping interests of the provinces needed protection and moved:

"That whereas the shipping interests of the Maritime Provinces are every year decreasing, and whereas the chief cause of such decrease is a treaty or treaties existing between the Imperial Government of Great Britain and several European nations, said treaty or treaties allowing the shipping of such European nations to become common carriers in the Canadian coasting trade,

much to the injury of our merchant marine, be it therefore resolved that this Maritime Board of Trade respectfully ask the Canadian Government at Ottawa to use its good influence with the Imperial Government of Great Britain to have such treaty or treaties as far as concerns the Canadian coasting trade amended."

Proceeding, the mover argued that all knew our coasting trade was falling off. The reason was that foreigners were taking our coasting trade away from our Canadian sailors and ships. Their ships were built abroad, their sailors hired abroad, and their supplies purchased abroad, and yet they were allowed to of Canadian shipping.

Capt. Allen, in seconding the resolution, said the foreigners who were tak-



D. G. Smith, Chatham, N.B., Secretary Maritime Board of Trade, 1900-1.

ing away our carrying trade would live on half what our own sailors required. If we were to preserve our mercantile marine we must take some such action as proposed by the resolution.

Capt. Read explained the working of coasting laws. Canadian ships could not coast in United States, or United States ships in Canada, but owing to treaties between Great Britain and Norway and Sweden, ships of these countries could coast on Canada while Canadian ships did not have reciprocal rights in these countries. They wanted the Government to ask Britain to denounce the treaties with these countries so far as they concerned Canada, and thus put us on a fair basis to build up our shipping interests.

J. E. DeWolfe suggested a change in the wording of the resolution which was concurred in as appearing above.

Senator Ross was of the opinion that no harm would result from passing the resolution. Great Britain, however, was very conservative in regard to her treaties, and he did not think she would be likely to alter them. But supposing the resolution was given effect where, he asked, were the ships to carry on existing trade?

Mr. Campbell rose to remark that there existed very grave dissatisfaction in Great Britain itself among ship owners over the coasting laws along the lines just indicated. He thought the passing of the resolution would have an effect.

The resolution carried.

#### The Lobster Fisheries.

Wm. T. Tidmarsh, of Charlottetown, on behalf of the South King's board, introduced the following resolution:

"Whereas the rapid decline of the lobster fishery, as shown by the reports of the fishing affairs in the Maritime Provinces, is viewed with alarm by this board and as the decline appears to be greatest in those sections where illegal fishing is carried on,

"Resolved, that it is desirable that the Government take active measures to enforce the regulations for the protection of the lobster fishery by instructing the officials of the Marine and Fisheries Department to suppress illegal fishing after the season in their respective districts.

"Further resolved that fishing stations for educating our fishermen be established by the Government at suitable places along the Atlantic coast and the Gulf of St. Lawrence; and further, that it is desirable that the Government take into consideration the re-organization of the fishing service with the view of bringing it up to a higher state of efficiency.

"That a copy of this resolution be sent to the Minister of Marine and Fisheries and to the Maritime members of parliament.

In support of his resolution Mr. Tidmarsh read a very able and exhaustive paper on the fisheries of the Maritime Provinces in general.

Capt. Jos. Read seconded the resolution "without remarks."

H. A. Rice, of Canso, explained what was being done at Canso by the Scotch fishermen brought over by the Government to experiment with the herring



fisheries. Their meshes were too small, but despite this they had shown reason to expect our herring would yet command the same price as Scotch herring.

The resolution carried.

#### Sydney's Harbor.

Sydney's claim for the use of a steamer part of the Winter to keep her port open was presented by S. Shaver of that town, and seconded by Mr. Fraser, of Summerside.

On advice of Messrs. Rattenbury, Ross, Read and Allen the mover and seconder changed their resolution to a request for a steamer for themselves and secured the endorsement of the board for the following resolution:

"Whereas, Sydney being a steel and coal centre of great importance to the commercial interests of the Dominion of Canada by and through her splendid geographical position on one of the most useful and beautiful natural harbors in the world, enjoying as she does the distinction of being the second largest shipper in the Dominion, and aspiring to the claim in the near future of being the largest shipping port in Canada,

"Resolved, that this Board of Trade representing the bone and sinew of the commercial and other interests of the Maritime Provinces, do petition and request the Government of Canada to supply an ice breaking boat to be located permanently at Sydney, thereby making Sydney harbor an open port to the world in Winter as well as Summer, facilitating as it will the easy and safe shipment of steel and coal from our port at all seasons."

#### The Dog Fish Question.

C. Jameson, on behalf of the Digby board, animadverted on the ravages of the dog fish which now made fishing in some months unprofitable. He had learned from the papers that the Government proposed to establish three plants for the destruction of dog fish. He moved that:

"Whereas the Federal Government contemplate the establishment at certain points in the Maritime Provinces of fish reduction plants for the extermination of the dog fish, and the utilization of the products of such plants for fertilizing purposes,

"And whereas it is feared that the proposed plants may not be of sufficient capacity nor so situated as to render them capable of treating all the material available,

"Therefore, resolved, that the Gov-

ernment be respectfully requested further to grant a bounty of reasonable amount to any person or company proposing to establish similar works as a private enterprise at such places in the Maritime Provinces as may be approved by the Department of Marine and Fisheries.

The motion was seconded by W. M. Jarvis without remarks.

Senator Ross thought they should see whether dog fish could not be sold to the West Indies. A couple of thousand cases should be put up and the experiment tried. He would not recommend that they be put up as dog fish. That would cause a prejudice against them. They should be given some other name.

J. E. DeWolfe reported that dog fish



Chas. D. Stewart, former Corresponding Secretary Maritime Board of Trade.

had been put up in cans and were very edible when not known as dog fish.

Capt. Read approved of Senator Ross' suggestion. In the East Indies and China a fish very similar to the dog fish was daily sold in the markets. They might sell dog fish there.

The resolution was adopted.

#### Amherst Wanted Board.

J. A. Laws, of Amherst, wished to re-open the question of the next meeting place. Amherst was very anxious to have the board next year and were surprised the matter had been decided so early in the meeting. The board appreciated very much the invitation from Amherst but were unable to re-open the question. The invitation, however, was

ordered placed on the minutes to give Amherst a claim the next time the board meets in Nova Scotia.

#### Steel Ship Building.

This very important subject was brought before the board by J. E. DeWolfe, of Halifax, who moved as follows:

"Whereas the substitution of steel for wood in the construction of ships has reduced Canada from her position as one of the four ship-building and ship-owning countries of the world to a place amongst the most unimportant;

"And whereas her coast line on two oceans of over two thousand (2,000) miles, with enormous lake and river navigation leading to the interior of the continent, has produced not only a great coastwise and foreign trade, but a large population skilled in maritime affairs;

"And whereas Canada possesses all the natural facilities and materials for the production of steel vessels, but is prevented from utilizing them by reason of the skill and capital employed in British yards, which have established England's supremacy in this industry, the products of which are admitted free to our coastwise as well as foreign trade;

"And whereas the above conditions prove that Canada can never regain her position as a maritime country unless the Government offers inducements by bonus or otherwise to shipbuilding companies to establish that industry;

"Whereas several municipalities and Boards of Trade in the Maritime Provinces have memorialized the Dominion Government to grant aid to the industry by means of bonus or otherwise, and;

"Whereas a similar memorial from parties interested in this industry in Western Canada has also been presented to the Government;

"Resolved, that the Maritime Board of Trade hereby endorses and approves the principle of a bonus to steel ship-building, as offering a new and profitable field for the utilization of our steel products, the employment of skilled labor, and more than all, in the creation of a new mercantile marine, which was formerly a great source of wealth to our country."

In seconding the resolution B. F. Pearson, of Halifax, pointed out the necessity of cheap transportation for our rapidly increasing exports. But as a matter of fact he showed Canadian shipping had decreased in numbers and tonnage. The only remedy was a bonus,



which was by no means a new expedient.

N. Rattenbury in view of the immense exports we were soon to have, thought it of the utmost importance that the question of shipbuilding be solved and a bounty be granted.

Senator Ross said the question was a large one, and he thought some encouragement should be given help to the provinces to regain the place in the shipbuilding trade they had once held.

The resolution was passed unanimously.

#### Weights of Packages.

The last item to be discussed at the evening session was the one from St. John in regard to the weights of packages.

J. Hunter White moved, seconded by W. M. Jarvis:

"That whereas the interests of consumers are materially affected by a growing custom of short weight in putting up of various kinds of goods sold either canned or in packages, and whereas the reputation of wholesale dealers in such goods is also prejudiced thereby,

Therefore resolved, that this Maritime Board of Trade submit to the Government the importance of providing by law that in the case of such goods each can or package shall be marked with the net weight of the article contained therein and that suitable penalties be imposed for infraction of the law where it shall appear that there was short weight at the time of putting up such goods."

Messrs. Jarvis, Bell, Smith, Anderson, Read, Moore and Birch expressed their approval of the resolution, and it passed as read.

#### The Final Session.

The board resumed business Friday morning at 9.30, imbued with a determination to dispose of matters with dispatch, and a large amount of work was concluded before rising at one o'clock.

#### Labor Legislation.

The first matter considered was Moncton's resolution on the labor question, J. T. Hawke and Capt. Jos. Read standing sponsors for it. The resolution read:

"Whereas municipal corporations in the Province of New Brunswick have been applying for and obtaining authority to impose a license fee upon mechanics and laborers working within and residing outside the municipality.

"Therefore, resolved that in the opinion of this board of trade, such legislation is not in the best interest of the

province, and that such power should not be granted to municipal corporations."

The mover of the resolution protested against the aggression of the labor unions, especially as in Moncton it was almost impossible to secure labor. The resolution met with the favor of the board.

#### Fast Atlantic Service.

The father of the movement for the fast Atlantic service, A. M. Payne, of Halifax, again brought the subject briefly to the attention of the board, and proposed this resolution:

"Whereas the construction of a second Canadian Transcontinental Railway, and the growing expansion of Canadian exports and imports indicate the imperative necessity of utilizing Canadian shipping ports to the fullest possible extent, in order to keep pace with constantly increasing internal development,

"And, whereas, the maintenance of a separate Summer and Winter Atlantic mail service between Britain and Canada has proved inadequate to the requirements of Canadian commerce;

"And, whereas, it has been admitted in the Dominion Parliament that nine-tenths of the Canadian mails to and from Great Britain are dispatched and received via New York;

"And, whereas, the Home Government has recently granted the largest ocean mail subsidies on record to assist in the construction of the two fastest steamers in the world for service at foreign ports;

"And, whereas, the establishment of a Canadian fast Atlantic service affords a material all round decrease in mileage and consequently a more rapid conveyance of the Imperial mails to and from the Orient;

"And, whereas, the Atlantic ports of Canada are several hundred miles closer to the Motherland than other ports, and better adapted for rapid ocean mail transit on modern lines;

"Therefore, resolved: That the Maritime Board of Trade strenuously protests against the present divided system of Atlantic mail transit, which, at a cost of over a thousand dollars per day, only provides an ocean mail service very slightly, if at all, in advance of the average time of delivery for the Atlantic mails at the inception of ocean steamer navigation, three-quarters of a century ago:

"And further resolved: That in view of the fact that over twenty steamers with a speed of from twenty to twenty-three knots are now plying on the North Atlantic, the time has arrived for the people of this Dominion of Canada, with the aid of its Government, to in-

augurate the long promised fast Atlantic service on the basis recently suggested by an acknowledged authority on the subject as 'The fastest ocean steamers on the shortest ocean passage'."

Capt. Read, in seconding the resolution, urged that the board keep agitating for a fast line for Canada as are to be had at New York. Halifax harbor, he said, was excelled by no harbor in the world.

Capt. Allen supported the resolution, and referred to the immense quantities of produce Canada would soon have to export. Trade would become congested, and he thought the Government should subsidize a fast Atlantic service which, contrary to prevalent opinion, would carry large quantities of freight.

Alex. Stephen of Halifax believed the time had arrived for a fast Atlantic service. A seventeen knot service was not good enough. He did not think it creditable that Canadians should cross the Atlantic via New York. He gave the board a motto he had seen on the tent of a party of campers, 'Whilst we live, let there be no doubt about it.' They should adopt this motto in their efforts to get a fast service.

Hon. Wm. Ross thought it unfortunate to have to pay heavy subsidies to a line which, after all, would give only a 17 knot service. "Let us have the fastest and best possible," continued Mr. Ross, warming up. The people in Ontario were narrow minded on this matter. They should eat more fish, and forget their prejudices.

The resolution was carried enthusiastically.

#### Improvement of Intercolonial.

R. L. Starr, of Wolfville, introducing this subject, stated that the Intercolonial had been built when speed was not so important as at present. He mentioned many places where the road could be improved. This was necessary, especially if we were to have a fast Atlantic service, and were to compete with American lines. It would take some years and should be begun at once. He therefore moved that:

"Whereas, it is considered advisable by this board that the Intercolonial Railway shall be so improved by double tracking where needed, by improving terminal facilities at Halifax, and by shortening and improving the grades where possible so as to provide for fast and increased traffic which will result from the establishment of a fast line to steamers from Halifax to Great Britain;

"Therefore, resolved: That the Dominion Government be respectfully requested to take this matter into careful consideration and inquiry, to appoint a competent person or commission



to survey and report upon the possible improvements, the estimated cost of such changes, as far as possible the benefits likely to accrue from such changes, and the extra speed to be attained by fast trains over the improved line."

J. B. Oakes remarked that the improvement of the Intercolonial was vitally related to the other reforms desired by the board.

Hon. Wm. Ross had a good word to say for the present Minister of Railways. The road could, he said, be shortened 12 miles between Moncton and Amherst.

J. T. Hawke thought the board need have no hesitation in adopting the resolution, but he said the Government had already anticipated much asked for in the resolution.

The resolution was carried without opposition.

#### **P. E. I. Freight Rates.**

Prince Edward Island had another grievance in the excessive freight rates to and from inland points on the mainland. In this connection G. H. Hughes, of Charlottetown, moved, seconded by Capt. Read, that:

"Whereas, shipments from points on the P. E. I. Railway to points on the I. C. R., and shipments from stations on the I. C. R. to stations on the P. E. I. are subject practically to three short haul rail rates, Winter and Summer, the ferry service on the Straits charging a short haul rate; and

"Whereas, shippers on the I. C. R. from points on the mainland to stations in Cape Breton, notwithstanding the ferry service at the Straits or Gut of Cause, are only charged a continuous railway haul, the resulting overcharge on shipments to and from the Island on fifteen ton carloads of 8th class produce on an 80-mile haul is equal to the difference between \$45 and \$28, as compared with an equal haul on the Intercolonial. Rates on first-class goods show a much greater injustice against Island shippers to the mainland than mainland shippers to the Island;

"Therefore, resolved: That in the opinion of this board the rates of freight from all points on these Government roads to and from the Island should be adjusted on the basis of a continuous rail haul,

"Resolved, that the same principle apply to shipments originating at Island points and transferred to the Intercolonial;

"Resolved, that copies of this resolution be sent to the Minister of Railways and our Maritime representative at Ottawa."

A. M. Bell of Halifax supported the resolution, but advised the Islanders to agitate for a broad gauge railroad and transfer ferry.

W. F. Tedmarsh of Charlottetown concurred with Mr. Bell.

Mr. Bovyer mentioned instances of exorbitant rates.

The resolution was adopted.

#### **Committee on Ship Building.**

At this juncture the president announced that instead of appointing the committee to implement the ship building resolution directly, he would ask the boards of Halifax, Sydney, Dartmouth and St. John to appoint committees to take the matter in hand, the Halifax board to be convenor.

#### **The Wood Industry.**

F. G. Bovyer, South Kings, P. E. I., seconded by Capt. Read, moved that:

"Whereas, the Maritime Provinces are eminently adapted to the wool raising industry, and woolen cloths at times manufactured contained inferior substances;

"Therefore, resolved: That it is desirable that the Government be requested to place such restrictions on manufacturers that will compel all woolen fabrics to be plainly marked as to proportion of pure wool or adulterations therein contained, in a manner similar to the legal restrictions placed by Government on manufactured imitations of dairy products, such as oleomargarine filled cheese, etc."

The resolution was adopted with little discussion. •

#### **Undesirable Advertisements.**

C. Jameson of Digby found a grievance in undesirable advertisements that sometimes crept into newspapers, tending to deceive the public, such as wild-cat stock promotions, and proposed a resolution as follows:

"Resolved, that this board, having in mind the patriotism and sense of fair-play of our Canadian newspapers as a whole, cannot but regret the occasional publication therein of prospectuses and advertisements inviting and encouraging investment in ventures the commercial standing of which is entirely doubtful as unknown, and the object of which is to enrich the promoters at the expense of the public, thereby prejudicing the flotation of legitimate enterprises calculated to aid in the development and stimulate the production of the country;

"Further resolved, that this board entertains the hope that by the increased care and discretion of publishers the prospectuses and advertisements of unscrupulous promoters may in future be denied space in the Canadian press."

M. G. DeWolfe seconded the resolution,

although rather at a loss to know how it could be made effective.

J. T. Hawke, as a newspaper man, supported the resolution. It would have a moral effect, and one that was much needed in these days when so many doubtful advertisements were being hawked about.

D. G. Smith did not think anything practical could come out of the resolution. If he did he would vote for it.

The motion was adopted.

#### **To Preserve Historic Spots.**

A resolution of unique but most commendable nature was brought forward on behalf of the Wolfville board by J. B. Oakes, who moved that:

"Whereas places of historic interest in the Maritime Provinces constitute one of the leading attractions, inducing tourist travel and the circulation of considerable money, and whereas most of these places are now owned by private persons and are unsightly and unmarked by any monuments and in consequence of which they are disappointing to strangers visiting among us, and whereas our historical societies could probably secure the erection of suitable monuments thereon by private subscription and thus foster in a higher patriotism and more firmly cementing the ties binding our English and French people together, therefore resolved that the Dominion and Provincial Governments be respectively memorialized and requested to take such steps as may result in the public ownership of the more important of these places commemorative of and binding us to our past."

Mr. Oakes supported his resolution with an address of a high order, alluding to the educative value of such spots in fostering patriotism in the young. Canada was slow in preserving her historic spots though no country possessed the scenes of deeds of greater value.

R. W. Starr, seconding the resolution, recounted what the Wolfville board had done. These historic spots now on private ground should be taken up by the Government.

A. E. Atlee supplemented these remarks with a summary of the work done at Annapolis. It would be a shame to allow these old historic places to remain in private hands and possibly destroyed.

Hon. Wm. Ross agreed it was very desirable that our children should be made familiar with our glorious history. He supported the resolution, which was carried enthusiastically.



**Bank Cheques.**

O. B. Smith drew the attention to the prevalence of paying accounts by cheques and the loss resulting from the excessive exchange on cashing such cheques, and moved:

"Whereas chartered banks have established agencies at different points in the Maritime Provinces, and cheques drawn on these agencies have come into general use as a circulating medium,

"And whereas such cheques do not represent their face value outside the town or city in which they are drawn, and through custom the receiver is obliged to lose the exchange, an item which in the aggregate represents many thousands of dollars annually to the jobbing and distributing trade in the Maritime Provinces,

"And whereas the present charges made by the banks for cashing such cheques are considered excessive particularly for small amounts up to thirty dollars,

"Therefore resolved, that this board confer with the Clearing House Association at Halifax and St. John with a view to adjusting present exchange rates on a basis at least equal to that charged by express companies for transmitting similar amounts."

The motion was seconded by A. M. Bell and passed without opposition.

**Cables and Telegraphs.**

J. E. DeWolfe complained of injustice in the rates charged for sending messages by wire to and from the island and supported by Capt. Jos. Read, moved as follows:

"Resolved, that this board puts itself on record as in favor of the Government ownership and operation of telegraphs as in the United Kingdom, and that pending the general acquirement of the various systems the Government be memorialized to expropriate and operate the lines and cable of the Anglo-American Telegraph Co. from Sackville, New Brunswick to Prince Edward Island, including the land lines in the latter province.

The resolution was adopted.

Moved by J. B. Oakes, seconded by M. G. DeWolfe that the boards of Annapolis, Wolfville, Sackville and Moncton each appoint a member on a committee to communicate with the Government on the matter of preserving historic grounds. Carried.

**Financial Report.**

As the ordinary business of the board

was now concluded (item 22 and one or two others having been withdrawn owing to lack of time) the secretary presented his financial report.

**THE MARITIME BOARD OF TRADE.**

|                                 |          |          |
|---------------------------------|----------|----------|
| In account with Chas. M. Creed, |          |          |
| Permanent Secretary.            |          |          |
| To general expenses for 1904    | \$121 49 |          |
| To Secretary's salary.....      | 125 00   |          |
|                                 |          | \$246 49 |
| CREDIT.                         |          |          |
| By balance from 1903 .....      | \$184 15 |          |
| By subscriptions for 1904.....  | 238 18   | 421 33   |
| Balance.....                    |          | \$174.84 |
| Examined and found correct.     |          |          |
| M. G. DEWOLFE,                  |          |          |
| Auditor                         |          |          |

**Votes of Thanks.**

Before dispersing M. G. DeWolfe rose to his feet to move the hearty thanks of the board to the Mayor and city of Moncton for the magnificent way in which the board had been entertained. They had been given the freedom of the place, not only in the city but all the way out to Memramcook. They had had an enjoyable and profitable time and would look forward to three years from now when he expected they would come again to Moncton to be present at the turning of the sod with a view to making Moncton the terminus of the new transcontinental railway.

He also wanted to move the thanks of the board to the Y.M.C.A. for their great kindness in furnishing these rooms and extending to the members the privileges of the house.

One thing more must not be forgotten and that was to thank the MacLean Publishing Company for once again taking the pains and expense of sending one of their editors here to report in full the proceedings of the board; also the local press for their kindness.

The thanks of the board were also due the president for the kind and able manner in which he had fulfilled his arduous duties. It was a difficult position to fill, especially with such a strong delegation from the sister island.

He would further add the gentlemen of Memramcook who had driven them about on Thursday and Father Cromier for the splendid hospitality at St. Joseph College.

The motion was carried with enthusiasm by a standing vote and the secretary was instructed to communicate the sentiments of the board to the gentlemen concerned.

The president responded graciously for his own behalf and J. T. Hawke on behalf of the Moncton Board of Trade.

Capt. Read thanked the board for electing him to the honorable position of first vice-president; and moved at the same time, seconded by J. E. DeWolfe, a hearty vote of thanks to the Hon. Wm. Ross for coming at his age to the meeting and assisting the board with his valuable counsel and advice.

The motion was received with applause and the Hon. Mr. Ross replied feelingly.

With this the board adjourned to meet next year in Yarmouth, N.S.

**Notes.**

Moncton is a Scott Act town!

The Kentville board, as usual, sent a strong delegation of good live men.

F. W. Sumner, president of the local board, directed the trip to the oil fields.

Mayor Ryan, who welcomed the board to Moncton, is the proprietor of a well-kept grocery.

Most of the delegates found time during their stay to witness the arrival of Moncton's famous Bore.

Senator Wood made an admirable presiding officer and never the least friction was noticed in the proceedings.

The citizens both in Moncton and the Memramcook Valley expect great things from the development of the oil fields.

Secretary Creed, despite his three score and ten and four years, retains all his old-time vigor and good fellowship.

Seventy-three delegates registered, representing twenty-two boards, making one of the most representative Maritime Boards for some years.

Capt. Jos. Read, of Summerside, besides being an old sailor, an ex-shipbroker and present shipper, is a raconteur of no ordinary ability, and can spin yarns of the sea by the hour to the charm and interest of his hearers.

It is interesting to note that the public men of the province were well represented. Among these present were Senators Josiah Wood, Sackville, N.B.; and Peter McSweeney, Moncton, N.B.; M.P.'s Hon. W. Ross, Halifax, N.S.; and W. J. Logan, Amherst, N.B.; M.P.P.'s, B. H. Dodge, Kentville, N.S., and Capt. Jos. Read, Summerside, P.E.I.; M.L.C.'s, Geo. E. Hargrave, Charlottetown, P.E.I.; also Past Presidents, W. M. Jarvis, St. John, N.B.; M. G. DeWolfe, Kentville, and W. G. Loggie, Chatham, N.B. Past Vice-Presidents, J. E. DeWolfe, Halifax, N.S.; W. S. Fisher, St. John, N.B.; D. I. Welch, Moncton, N.B.; and A. Stephen, ex-Mayor of Halifax.



# MARKETS AND MARKET NOTES

## QUEBEC MARKETS.

Office of HARDWARE AND METAL,  
232 McGill Street,  
Montreal, August 25, 1904.

**Q**UOTATIONS on several of the important lines of hardware are marked by a decrease within the past week. Business has assumed a livelier state since the holiday season and manifests a marked activity in nearly all lines. Dealers are waiting anxiously for a full report of the Manitoba wheat crop, upon the success of which so much depends regarding Fall trade. It is generally conceded that the rust reports have been exaggerated, and that a big crop will be harvested. This means much to the hardware trade, to whom the west is a most important market.

The cordage market has been somewhat weaker recently, and another drop in price has taken place, being a reduction of one half cent each on British manila and sisal rope. This is due in part to a reduction in the price of raw material and further to keen competition with both British and the United States manufacturers. American factories are quoting cement lower, which is having its effect on the local market. The wire decrease affects some lines very slightly at the present time, as they are in little demand. The wire nail situation has not changed. An advance of 50c a dozen is noted on barrel churns. Inquiries are coming in at a better rate than previously.

**Agricultural Wrenches**—There is still a good demand, with no change whatever in price. We quote the following: 6 in., \$2.85 a dozen; 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

**Grindstones**—An unusually good business is being done in grindstones this Fall. We quote as follows: 40 to 200 lbs., 2 in. and over thick, \$1.10 to \$1.20; 20 to 40 lbs., 2 in. thick and over, \$1.20; 11-12 in. thick and under 2 in., \$1.30.

**Skates**—The season has already opened up well. We quote the following prices: Halifax pattern, plain, 38c a pair; nickeled, 60c a pair; Ladies nickel plated, plain 58c a pair; good quality, \$1.25 a pair; good quality concaved, \$1.50 a pair; hockey, plain steel 30c a pair;

nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop \$1.30 a pair, high grade nickel plated, concaved \$1.60 a pair.

**Hockey Sticks**—Prices are: Second growth men's \$4.00 a dozen; second growth ash, men's, \$3.30 a dozen; rock elm \$2.35 a dozen; boys' elm, \$1.50 a dozen.

**Hockey Pucks**—Price quoted for coming season is \$2.10 a dozen.

**Lanterns**—These are moving at a much better rate than is usual for this season. We quote as follows: Cold blast, \$7 a dozen; No. 0 Safety, \$4 a dozen.

**Sleigh Bells**—The Winter trade is already receiving some attention, and sleigh bells are reported in good demand. Our quotations are: Brass team bells, rough \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5.00 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3.00 each.

**Washing Machines**—Fewer sales are reported this week. We quote as follows: Round (three legs) \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

**Wringers**—The advance noted last week still holds, while the market is fairly good. The discount is 33 1-3 per cent.

**Currycombs**—There is an active business being done, with no further change in price since last week, the discount is not 37 1-2 per cent.

**Ferry Screw Hooks and Hinges**—Very much less business being done in this line. We quote the following: Sizes 12 inches and upwards are selling at \$2.25 per 100 lbs.; the price of the 6 and 10 inch sizes is \$4.25.

**Wire Coat and Hat Hooks**—Merely a nominal business being done. Prices continue 75c a gross for three inch.

**Annealed Wire**—The market is quite brisk. The reduction noted last week,

which was very considerable, is likely to remain. The price has been lowered from a base of \$2.50 per hundred pounds to \$2.25.

**Fence Staples**—Fence staples are moving fairly well. We quote: \$3 per 100 pound keg for galvanized, and \$2.80 for bright; 25 to 50 lb. packages, 25c extra.

**Barb Wire**—Some orders for Fall shipment have been received, so that the market is more lively. We quote the following: \$2.75 per 100 lb. f.o.b. Montreal, and \$2.50 f. o. b. Cleveland. Car lots of 15 tons, \$2.40 f. o. b. Cleveland.

**Galvanized Wire**—There is very little demand for galvanized wire at the present time, although the price has been reduced considerably. We quote the new prices this week. In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 and 8, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

**Rivets and Burrs**—The market is active and a fair business being done. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

**Screws**—As mentioned in previous markets, there is a brisk demand in this line. Discounts are as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass flat head, 80 per cent.

**Bolts and Nuts**—An active market is reported. Sheighshoe bolts are in unusual demand this week. Prices and discounts remain the same. Quotations are: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts,



## PORTLAND CEMENT

CANADIAN, ENGLISH,  
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FIRE BRICKS, FIRE CLAY,  
ENAMELLED BRICKS, all colors.  
BUILDING BRICKS.

SEWER PIPES, CULVERT PIPES,  
WHEELBARROWS,  
FOUNDERS' and CON-  
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### F. HYDE & CO.

WELLINGTON ST., MONTREAL

## Deseronto Iron Co.

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DESERONTO, ONT.

Manufacturers of

## CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

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## Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

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We invite inquiries for

## Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,  
CANADA PLATES, TINPLATES, WIRE ROPE  
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS  
ORE BAGS, GRAIN BAGS, ETC.

**C.F. JACKSON & CO., Limited**

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,  
and LIVERPOOL, ENGLAND.

Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

**Cut Nails**—The cut nail market is slightly weaker at present, but no change in price is reported. The demand continues good. Quotations are \$2.50 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

**Wire Nails**—No change in price has been officially announced by the manufacturers, as it is impossible in the present state of the market to obtain exact quotations. Our nominal prices, as given last week, are left unchanged. It is well understood, however, that the old figures no longer apply, and that while competition continues as keen as it is at present, the actual price at which business is done, is in all cases a matter of individual bargaining. Quotations are \$2.40 per keg, car lots, and \$2.45 per keg in small lots, f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

**Pressed Spikes**—The discount of 25 per cent. continues, with no change in trade, which is a little quiet.

**Horseshoes**—A steady demand for horseshoes still continues. No change in price is reported. Quotations are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 6 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

**Horsenails**—An average trade is being done. We quote as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. Other brands 55 and 57 1-2 per cent off list.

**Sporting Goods and Supplies**—There is every reason to believe that the de-

## IRON STEEL and METALS

Close prices to wholesale buyers only.

### A. C. LESLIE & CO.

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We Make  
**PUMPS**  
for every conceivable use both hand and power.  
Take a look around your town and see if any of the breweries or hotels need new pumps.  
We can furnish the necessary material, special pumps for acids, liquors, etc.

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McDougall Pumps  
Made in Canada

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## "ALPHA"

**HIGH SPEED STEEL**  
**Crucible Cast Steel**  
for Tools of all kinds.

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NEW GLASGOW, N.S.

Manufacturers of

## Ferrona Pig Iron

And SIEMENS MARTIN

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ward for sporting goods and supplies is to be a large one this season. The prices of the different lines on application.

**Shot Guns and Rifles**—In common with other sporting goods the season promises to be unusually brisk. There is no reported change in price.

**Ammunition**—A splendid demand exists in nearly all lines. Canadian goods seem to be specially active. We quote: Rim fire cartridges, 30 and 21-2 per cent. discount from list; centre fire, 5 per cent. advance on list; loaded shells 17 1-2 per cent. discount from list.

**Roofing Pitch**—Roofing pitch continues in good demand throughout. The price stands as before, \$1 per cwt.

**Building Paper**—The trade report that no radical change has taken place, and business, while not brisk is fairly good. We quote: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

**Cement**—Quotations on cement are somewhat lower on the American market, and this has had its effect on local trade. American quotations are five cents lower per barrel. From now until the end of October is the harvest for cement dealers. Business has opened up fairly well. Quotations are: English, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel, ex store; and American \$2.15 to \$2.35, ex cars.

**Cordage**—The cordage market has been somewhat weaker recently, resulting in another drop in price. The reduction is one-half cent per pound each on British manila and sisal rope. We quote: British pure manila, 11c; pure manila 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

#### METALS.

The metal markets dominating those in Canada still continue quiet. A slightly brighter feeling prevails this week, although business is by no means

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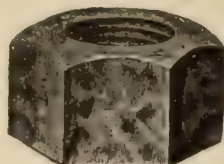
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Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs,  
Etc. Cold Punched Nuts of every variety of finish.

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**TORONTO EXHIBITION**  
in the Automobile Building

**John Millen & Sons**  
Montreal and Toronto

### "COMET" Brand Galvanized Sheets

are made of British Steel, manufactured at the works of

W. Gilbertson & Co., Limited, - Pontardawe, Wales

No better quality made.

Price low.

ALEXANDER GIBB, Agent,

MONTREAL

brisk. Pig iron continues dull, but bar iron is much more satisfactory, being in good demand. Trade in tool steel keeps up well. In Canada plates and black sheets the market is strong, and more active than recently. Black Canada plates have advanced on the British market the equivalent of ten cents a box, while galvanized are scarce. One line of galvanized iron, namely "Queen's Head," is quoted slightly lower. The sheet zinc market is firmer, and prospects are towards higher prices. Copper and pig lead are still scarce. Scrap metal seems to be on the eve of a turn for the better, as manufacturers are now busier and a demand is thus created.

**Pig Iron**—Little or no change has taken place in the pig iron market since last week, either in price or activity.

|                                             |                                        |
|---------------------------------------------|----------------------------------------|
| "Disc," No. 1.....                          | \$17.50 delivered Montreal.            |
| "Dom." No. 1.....                           | 18.50                                  |
| Usual difference in price for lower grades. |                                        |
| Ferrona No. 1.....                          | \$18.00 delivered Montreal.            |
| " No. 2.....                                | 17.50                                  |
| " No. 3.....                                | 16.50                                  |
| " No. 4.....                                | 16.00                                  |
| Londonderry.....                            | \$18.50 to \$19.00 delivered Montreal. |
| Summerlee.....                              | 18.50                                  |
| Glengarnock.....                            | 20.00                                  |
| Gartsherrie.....                            | 19.25                                  |
| Carnbroe.....                               | 18.50                                  |
| Carron No. 1.....                           | 19.00                                  |
| " (special).....                            | 17.50                                  |
| Ayresome No. 1.....                         | 17.50                                  |
| " No. 3.....                                | 16.90                                  |
| Clarence No. 1.....                         | 16.25                                  |
| " No. 3.....                                | 16.00                                  |

**Bar Iron**—The demand continues brisk, but the market is reported weak. However, no change in price is noted. We quote: Merchants' bar, \$1.72 1-2; horse-shoe iron, \$1.97 1-2; - forged iron, \$1.92 1-2; net cash 30 and 15 per cent.

**Tool Steel**—A satisfactory condition prevails in the tool steel market, the



demand being good. We quote as follows: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

**Merchant Steel**—A nominal business has been done during the past week, with prospects fairly good. No change in price is recorded. Quotations are: Sleighslee, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.35; machinery (iron finish), \$2; square harrow, \$2.45.

**Canada Plates**—Galvanized Canada plates continue scarce. Black plates have advanced on the English market, which continues strong. The demand is fairly satisfactory. We quote as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60 and galvanized, \$4 to \$4.10; galvanized 60s, \$4; 52s, \$3.75.

**Black Sheets**—The demand keeps up well and as reported before large orders are being received for Fall import. Prices quoted are still subject to concessions. We quote as follows: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

**Galvanized Iron**—While on the whole the galvanized iron market continues steady Queen's Head is quoted at a slightly lower price this week. A good trade is being done with splendid prospects for the near future. Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge, \$3.55; Appolo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28 gauge, \$4.30. "Windmill Best," 28 gauge, \$4. In less than case lots, 25c extra.

**Sheet Zinc**—The sheet zinc market is firmer, and prospects are towards higher prices. We quote, case lots at \$6.25 to \$6.50, and small quantities at \$6.50 to \$6.75.

**Tin Plates**—Tin plates continue firmer, and the demand is fairly good: Cokes \$3.75 and charcoal \$4.

**Ingot Tin**—A fair demand exists, while the market is still weak, prices quoted are subject to concession. Quotations are 30c to 30 1-2c.

**Ingot Copper**—The copper market re-

mains firm. There is still a scarcity of the metal and no near likelihood of an ample supply. Quotations are 13 1-2 to 13 3-4c. The former price is for quantities only and is firmly held at that.

**Pig Lead**—As is the case with copper, pig lead is also scarce. The market is very firm, but no change of price is noted. We quote \$3.25 to \$3.35.

**Scrap Metal**—Scrap metal seems to be on the eve of a turn for the better. Manufacturers are resuming more active operations and are consequently creating a demand for these metals. Stove plate is quoted \$2 lower. Owing to the low prices in rags collections have fallen off, and there is not enough stock to meet the demand. Consequently the market is strong and an advance is expected shortly. Our quotations are as follows: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$10; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

**Coil Chain**—We quote: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on carlots.

### ONTARIO MARKETS.

Office of Hardware and Metal,  
10 Front street east.  
Toronto, August 26, 1904.

**T**HE market this week exhibits a marked improvement which was started last week. If the crops in the west turn out as present indications show there will be a very active market during the Fall. The only change in quotations are in cordage; British pure manila and sisal have both slumped 1-2 cent.

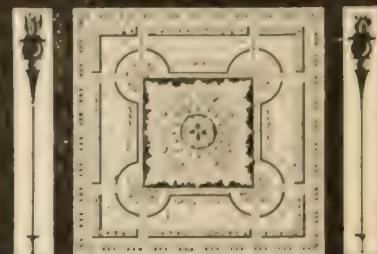
Sporting goods are still the most active line on the market. Orders are being booked in good shape, and everything promises a good Fall trade in this line.

Winter sporting goods are now receiving considerable attention at the hands of wholesale dealers, and they are beginning to put in stocks.

**Shot Guns and Rifles**—The demand for this line is one of the features of the market at the present time. The demand is also increasing each week.

## OUR METALLIC CEILING AND WALLS

Are both artistic and serviceable.  
Popularly used by practical people  
everywhere.



Easily applied—most moderate in cost—fire-proof, sanitary and wonderfully durable—with countless designs to select from.

Write us for booklet telling all about them.

**METALLIC ROOFING CO., Limited**  
Wholesale Mfrs. TORONTO, CANADA.

**Ammunition**—The demand is increasing, and there is likely to be a good trade this Fall. Quotations are: Rim fire cartridges, 30 and 2 1-2 discount from list; centre fire, 5 per cent. advance on list.

**Harvest Tools**—A steady demand keeps up.

**Washing Machines**—There is very fair demand for this line. We quote: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Downswell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

**Woodenware**—A very fair business is being done. Quotations are unchanged as follows: Tubs, No. 0, \$11.25; No. 1, \$9.00; No. 2, \$8.00; No. 3, \$7.00; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2.00; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

**Steel Track Door Hangers**—There is little change in the situation. Business is very fair for this season.

**Chain**—The demand is fair. Prices are quoted as follows: 1-4 in., \$6.50; 5-16 in., \$4.45; 3-8 in., \$3.80; 7-16 in., \$3.70; 1-2 in., \$3.65; 9-16 in., \$3.45; 5-8 in., \$3.35; 3-4 in., \$3.25.

**Step Ladders**—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.



**Barb Wire**—The demand for barb wire is now very small. The season is now nearing its close, and thus the reason for the falling off in demand. Our quotations are as follows: \$2.75 per 100 lbs. f. o. b. Toronto and \$2.50 f. o. b. Cleveland. Carlots of 15 tons, \$2.40 f. o. b. Cleveland.

**Galvanized Wire** A fair trade continues at unchanged prices. We quote: No. 5, \$3.65; Nos. 6, 7 and 8, \$3.10; No. 9, \$2.45; No. 10, \$3.15; No. 11, No. 14, \$3.70. In carlots f. o. b. Cleveland, \$3.20; No. 12, \$2.60; No. 13, \$2.70; land, No. 5, \$2.15; Nos. 6, 7, 8 and 9, \$2.10; No. 10, \$2.15; No. 11, \$2.20; No. 12, \$2.25; No. 13, \$2.35; No. 14, \$2.45. In less than carlots, 12 1-2c per 100 lbs. extra charged.

**Coiled Spring Wire**—There are sorting orders coming in all the time. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

**Wire Nails**—There is little change on this market. The cutting in prices is still going on, nor does there seem to be any chance of the situation being relieved. Nominal quotations are: \$2.45 per keg f. o. b. Toronto, with carlots \$2.40.

**Cut Nails**—A moderate trade doing, with prices steady at \$2.30 per keg f. o. b. Toronto and Hamilton.

**Horseshoes**—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

**Horsenails**—Business is fairly good in this line. Prices remain unchanged. Quotations are: "C" brands, 40 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

**Screws**—A very steady demand keeps up. Prices are unchanged. We quote: Flat Lead bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

**Rivets and Burrs**—A steady and brisk

demand continues. Prices remain unchanged. We quote: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

**Bolts and Nuts**—A very fair demand is reported by all dealers. Prices are steady. We now quote: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

**Cordage**—British pure manila and sisal have slumped 1-2 cent. Otherwise prices remain unchanged. The season for binder twine is drawing to a close and the demand is about over. Our quotations are as follows: Sisal, 10 1-2c; standard, 10 1-4c; standard manila (550 feet), 11 1-4c; manila (600 ft.), 12 1-4c; pure manila (650 ft.), 13 1-4c. Five-ton lots 1-8c less. Carload lots 1-4c less. Prices on other lines are as follows: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sasheord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 24c; 4 ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

**Building Paper**—During the week the demand for roofing material has increased. Although prices are unchanged everything is firmer. Quotations are: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

**Firebrick**—As the result of large firms taking advantage of the present strike in order to get labor, the local demand for fire brick has increased. No material change in the price has resulted. Otherwise than the local trade the de-

mand continues to be the same. Our quotations are: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

**Cement**—Outside of the Builders' Exchange the local trade has brightened to a great extent, as certain people are taking advantage of the strike in order to get labor. The demand in general continues to be good. Prices are unchanged. Our quotations are as follows: Canadian Portland, \$1.70 to \$2; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2; ex-store; American Portland, \$1.80 to \$2.10 f. o. b. Toronto.

## METALS.

The metal market this week exhibits a very gratifying improvement. The Fall trade is commencing and the Summer season, always quiet, is about over. Import orders are now arriving upon the market. Of course the Fall trade depends to a large extent upon the crops in the Northwest and Ontario. At present the outlook for a heavy wheat crop in the west is good, but in Ontario the wheat crop has been a comparative failure. Other crops are, however, good. Ingot copper has a more active demand this week. The market for solder is also more active. The demand for antimony has brightened, as has also that for tin. Zinc spelter is again quiet. The market for old material exhibits a brighter aspect this week.

**Pig Iron**—Buyers of foreign iron are still buying in small lots, car loads, and seem to be hesitating about placing large orders. As far as Canadian iron is concerned, however, there is a very active demand.

|                                     |                  |
|-------------------------------------|------------------|
| Middlesboro, f. o. b., Toronto..... | \$18 70          |
| Hamilton, No. 1.....                | \$17 50 to 18 00 |
| " No. 2.....                        | 17 00 to 17 20   |
| " No. 1, Hamilton.....              | 16 25 to 16 55   |
| Midland, No. 1.....                 | 16 00 to 18 00   |
| " No. 2.....                        | 17 00 to 17 25   |
| " No. 1 f. o. b. Midland.....       | 16 25 to 16 75   |
| Radnor, f. o. b. furnaces.....      | 27 50            |
| Londonderry, f. o. b. furnaces..... | 16 50 to 17 00   |

**Bar Iron**—A good business is being done, and prices are firmly maintained. We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

**Steel**—A very good demand is reported, and prices are steady. Quotations as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible



sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

**Tin**—Prices are unchanged. The market has improved and is fairly active. Quotations are from 30c to 31c.

**Galvanized Sheets**—There is a very fair demand. The margin, however is very close. We quote as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

**Tin Plates**—There is a very good demand, with prices unchanged. Stocks are light. We quote the following: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

**Canada Plates**—There is a very good demand. Prices remain unchanged. We quote: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

**Copper**—Both ingot copper and sheets are active. Prices are steady, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

**Brass**—Conditions are unchanged. There is a fair demand, with discount steady at 15 per cent.

**Lead**—There is a good demand with prices very firm. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

**Zinc Spelter**—The demand has slackened off. Prices are from 53-4c to 6c per lb.

**Solder**—This market has picked up and is active. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

**Antimony**—The market exhibits activity this week. Quotations are: 71-2 to 8c per lb.

**Old Material**—During the week under review the metal market has brightened up and trade runs along more briskly. All lines are firmer with the exception of machinery cast scrap, which has made a slight drop during the week and is now going at from \$10 to \$11. Our quotations are as follows: Heavy copper and wire 10 1-4c per lb.; light copper, 9 1-4c per lb.; heavy red brass, 7 to 7 1-2c per lb.; light brass, 5 to 5 1-2c per lb.; lead \$2.20 to \$2.40 per cwt.; scrap zinc 3 1-2c per lb.; iron, No. 1 wrought, \$8 to \$9; No. 2 wrought, \$2; machinery cast

scrap, \$10 to \$11; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers, 4 to 4 1-2c per lb.; country mixed rags, 60c per 100 lbs.

**Petroleum**—This market continues steady. The demand is good. Prices are unchanged. We quote: Canadian water white, 17 1-2c; Canadian prime white, 16c; American water white 18 1-2c, ex-warehouse.

## TRADE CONDITIONS IN BRITISH COLUMBIA.

Special correspondence of *HARDWARE AND METAL*.

**I**N the direct hardware trade there is little change in conditions in the west. Business is active and with good prospects. Locally there are never any particular alterations in prices to note, but this week there is a decline of 1-2c per lb. in rope. This is not due to outside influences, but to cutting of prices among local dealers.

High water in the lower Yukon has been of great assistance to the freighting of merchandise from St. Michael to Dawson. It is the usual way to ship the heavier goods by steamer from Vancouver to St. Michael, from which port river steamers take it to Dawson. Nearly every Summer the great difficulty has been the very low water, and there have been few seasons that boats have not grounded on the bars, in many instances being frozen in. This year there has been an unusual amount of water from the Porcupine and its tributaries, and the Yukon has been full from bank to bank.

On the upper river the water has been low. The special commodity rates of the White Pass, Yukon River, which expired last Monday midnight, were the means of inducing shippers to make a special effort to get in goods when the water was at its best, and as a result considerable went up. The object is to prevent the staples being left at White Horse all Winter, as is usually the case. Procrastination seems to be a very prominent part of human nature, and every year shipments are delayed so late that it is impossible to get them through to Dawson before the close of navigation. Hence the special rates. Even with them, it was only until about two weeks before the close that merchants began to take advantage of them to any great extent.

Loggers on the B. C. coast are hampered this year by a lack of water supply for their donkey engines. The Summer has been very dry, and since the first of June there having been two days of good rain. The result has been that the pools of water in the woods have dried up, and as a consequence several logging camps have had to close down. Forest fires have also been a great handicap to operations in the woods, besides destroying a very considerable amount of standing timber. The fires are raging from the eastern boundary to the coast, and on Vancouver and all over the province towns have been threatened with destruction. In the Kootenay, mining companies have suffered by having flumes, etc., burned.

• • •

Steamer Oanfa, one of the big boats of the China Mutual Line, is in port this week discharging 1,100 tons of general merchandise.

The project of the Chilliwack Tram, Power and Light Co. is of great interest to the people there. The plan is to connect Chilliwack with New Westminster by electric railway, and to establish telegraph, telephone and light systems.

Wright & Son, of Everett, have taken over the Hazelmore shingle mill, and are making extensive additions to the plant and premises.

The Pacific Coast Wood Pulp and Power Co., with head offices in London, England, has absorbed the Pacific Coast Power Co. and the Industrial Power Co., both of Vancouver, and is now actively engaged in floating the concern. The mills are to be located at Powell River, about 80 miles north of Vancouver on the coast of the mainland. The Bella Coola Power and Pulp Co. is also taking steps to develop its resources.

A considerable amount of telephone construction is to be carried out in the near future. The new cable line to Victoria will soon be laid; a system put in in North Vancouver, with submarine connection with the city of Vancouver; and the Britannia Mines are arranging for connection with their properties, 40 miles from Vancouver.

Work on the new public hall at Vancouver, to cost \$350,000, is to be commenced shortly, according to announcement of R. G. Macpherson, M.P., who has returned from Ottawa.

Vancouver, August 19, 1904.



## HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL  
Room 308 McIntyre Block,  
Winnipeg, Aug. 22, 1904.

THE most glowing reports are now circulating pertaining to the splendid and prospective condition of the grain. In some parts of the country the grain is so far advanced that cutting has already commenced, and it is only a matter of a few weeks before the threshing will be general throughout the Northwest.

The market practically holds the price list the same as last week, with little or no change of any note.

Mr. A. Bennett, of the firm of A. Bennett & Co., of London, Ont., manufacturers of the Bennett Patent Saddle Iron, is at present in the City of Winnipeg.

|                                              |        |
|----------------------------------------------|--------|
| Barbed wire, 100 lb.                         | \$3 15 |
| Plain galvanized.....6 to 8                  | 3 39   |
| ".....9                                      | 2 50   |
| Plain galvanized.....10                      | 3 50   |
| ".....12                                     | 3 10   |
| ".....13                                     | 3 20   |
| ".....14                                     | 3 90   |
| ".....15                                     | 4 45   |
| ".....16                                     | 4 60   |
| Plain twist.....                             | 3 15   |
| Staples.....                                 | 3 65   |
| Oiled annealed wire.....10                   | 3 42   |
| ".....11                                     | 3 48   |
| ".....12                                     | 3 56   |
| ".....13                                     | 3 66   |
| ".....14                                     | 3 76   |
| ".....15                                     | 3 91   |
| Annealed wires (uncoiled) roc. less.         |        |
| Horseshoes, iron, No. 0 to No. 1.....        | \$4 75 |
| No. 2 and larger.....                        | 4 45   |
| Snow shoes, No. 0 to No. 1.....              | 4 60   |
| No. 2 and larger.....                        | 4 45   |
| Steel, No. 0 to No. 1.....                   | 4 45   |
| No. 2 and larger.....                        | 4 20   |
| Horsenails, No. 4—1 1/4 in., list price..... | 0 48   |
| " " 5—2 " ".....                             | 0 32   |
| " " 6—2 1/2 " ".....                         | 0 28   |
| " " 7—2 1/2 " ".....                         | 0 24   |
| " " 8—2 1/2 " ".....                         | 0 22   |
| " " 9—2 1/2 " ".....                         | 0 20   |
| " " 10—2 1/2 " ".....                        | 0 20   |
| " " 11—2 1/2 " ".....                        | 0 20   |
| " " 12—2 1/2 " ".....                        | 0 20   |
| " " 14—3 1/4 " ".....                        | 0 20   |

Discount on these prices 40, 10, 7 1/2 per cent., plus 15c. per box.

| Cut Nails—                                 | Wire Nails—       |
|--------------------------------------------|-------------------|
| 2d 1 in.....\$4 10                         | 1 in.....4 15     |
| 3d 1 1/4 in.....4 10                       | 1 1/4 in.....4 10 |
| 3d 1 1/2 in.....3 75                       | 1 1/2 in.....3 70 |
| 4d 1 1/4 in.....3 50                       | 1 1/4 in.....3 50 |
| 5d 1 1/2 in.....3 50                       | 1 1/2 in.....3 50 |
| 6d 2 in.....3 40                           | 2 ".....3 40      |
| 8d 2 1/2 in.....3 25                       | 2 1/2 ".....3 25  |
| 10d 3 in.....3 20                          | 3 ".....3 20      |
| 20d 4 in.....3 15                          | 3 1/2 ".....3 15  |
| 30d 4 1/2 in.....3 10                      | 4 ".....3 10      |
| 40d 5 in.....3 10                          | 4 1/2 ".....3 10  |
| 50d 5 1/2 in.....3 10                      | 5 ".....3 10      |
| 60d 6 in.....3 10                          | 5 1/2 ".....3 10  |
|                                            | 6 ".....3 10      |
| Bar iron (basis).....                      | 2 50              |
| Swedish iron (basis).....                  | 4 75              |
| Sleigh shoe steel.....                     | 2 85              |
| Spring steel.....                          | 3 25              |
| Machinery steel.....                       | 3 50              |
| Tool steel, Black Diamond, 100 lb.....     | 8 50              |
| Jessop.....                                | 13 00             |
| Sheet iron, black, 10 to 16 gauge, 100 lb. | 3 50              |
| 18 to 22 gauge.....                        | 3 75              |
| 24 gauge.....                              | 3 90              |
| 26 gauge.....                              | 4 00              |
| gauge.....                                 | 4 10              |

|                                                              |      |
|--------------------------------------------------------------|------|
| Galvanized Iron, Apollo, 16 gauge.....                       | 4 00 |
| 18 and 20 gauge.....                                         | 4 00 |
| 22 and 24 gauge.....                                         | 4 25 |
| 26 gauge English or 28 American.....                         | 4 25 |
| 28 gauge.....                                                | 4 50 |
| 30 gauge or 10 1/2 oz.....                                   | 4 75 |
| Extra sheets, 36 in. wide an advance of 25 p.c. per 100 lb.  |      |
| Queen's Head, 24 gauge.....                                  | 4 25 |
| 26 gauge.....                                                | 4 50 |
| 28 ".....                                                    | 4 75 |
| Extra sheets, 36-in. wide, an advance of 25 p.c. per 100 lb. |      |

|                                                 |          |
|-------------------------------------------------|----------|
| Genuine Russian, per lb.....                    | 11       |
| Imitation ".....                                | 07 to 08 |
| Tinned, 24 gauge, 100 lb.....                   | 8 00     |
| 26 gauge.....                                   | 8 05     |
| Tinplate, 1C charcoal, 20 x 28, box.....        | 9 50     |
| " IX.....                                       | 11 50    |
| " IXX.....                                      | 13 50    |
| Ingot tin.....                                  | 25       |
| Canada plate, 18 x 21, 18 x 24 and 20 x 28..... | 3 00     |
| Canada plate, full polished.....                | 3 75     |
| Sheet zinc, cask lots, 100 lb.....              | 7 00     |
| Broken lots.....                                | 7 50     |
| Pig lead, 100 lb.....                           | 5 00     |
| Black iron pipe, 1/2 inch.....                  | 2 80     |
| " 3/4 ".....                                    | 3 25     |
| Black iron pipe, 3/4 inch.....                  | 4 20     |
| " 1 ".....                                      | 5 85     |
| " 1 1/4 ".....                                  | 8 20     |
| " 2 ".....                                      | 10 00    |
| Rope, sisal, 7-16 and larger, basis.....        | 14 00    |
| Manila, 7-16 and larger, basis.....             |          |
| Lathyrum.....                                   | 11 25    |
| Solder.....                                     | 20       |
| Axes, chopping.....\$ 6 75 to 12 00             |          |
| " double bitts.....12 00 to 18 00               |          |
| Bluestone.....                                  | 5 25     |

|                                                    |  |
|----------------------------------------------------|--|
| Screws, flat head, iron, bright.....85 and 10 p.c. |  |
| Round " ".....80 p.c.                              |  |
| Flat " brass.....75 and 10 p.c.                    |  |
| Round " ".....70 and 10 p.c.                       |  |
| Coach " ".....70 p.c.                              |  |
| Bolts, carriage, 3/4 or smaller.....60 and 5 p.c.  |  |
| " 7-16 and up.....55 p.c.                          |  |
| Bolts, machine, 1/4 and under.....55 and 5 p.c.    |  |
| " 7-16 and over.....55 p.c.                        |  |
| Bolts, tire.....60 and 5 p.c.                      |  |
| Bolt ends.....55 and 5 p.c.                        |  |
| Sleigh shoe bolts.....70 p.c.                      |  |
| Machine screws.....70 p.c.                         |  |
| Plough bolts.....55 and 5 p.c.                     |  |
| Square nuts, case lots.....3c. discount.           |  |
| " small lots.....2 1/2 c.                          |  |
| Hex " case lots.....3c.                            |  |
| " " smaller lots.....2 1/2 c.                      |  |
| Rivets, iron.....50 and 10 p.c.                    |  |
| Copper, No. 8.....32                               |  |
| No. 12.....36                                      |  |
| Coil chain, 3-16 inch.....9 1/2                    |  |
| " 1/2 inch.....7 1/2                               |  |
| " 5-16 inch.....5 1/2                              |  |
| " 3/4 inch.....5 1/2                               |  |
| " 7-16 inch.....4 1/2                              |  |
| " 1/2 inch.....4 1/2                               |  |
| " 3/4 and 1/2 inch.....4                           |  |
| Spades and shovels.....40 and 5 p.c.               |  |
| Harvest tools.....60 p.c.                          |  |
| Axe handles, turned, s.g. hickory, doz.. \$3 15    |  |
| No. 1.....1 00                                     |  |
| No. 2.....1 60                                     |  |
| Octagon extra.....2 30                             |  |
| No. 1.....1 60                                     |  |

|                                       |  |
|---------------------------------------|--|
| Files common.....70 and 10 p.c.       |  |
| Diamond.....60 p.c.                   |  |
| Building paper:                       |  |
| Anchor, plain.....65c.                |  |
| " tarred.....70c.                     |  |
| Pure fibre, plain.....67 1/2 c.       |  |
| " tarred.....80c.                     |  |
| Ammunition, cartridges, Dominion R.F. |  |
| Dominion, C.F., pistol.....50 p.c.    |  |
| " military.....30 p.c.                |  |
| American R.F.....15 p.c.              |  |
| C.F. pistol.....30 p.c.               |  |
| C.F. military.....5 p.c.              |  |
| C.F. military.....10 p.c. advance.    |  |

|                                               |       |
|-----------------------------------------------|-------|
| Loaded shells:                                |       |
| Eley's soft, 12 gauge black.....              | 15 00 |
| chilled, 12 gauge.....                        | 16 00 |
| soft, 10 gauge.....                           | 18 00 |
| chilled, 10 gauge.....                        | 19 00 |
| Shot, Ordinary, per 100 lb.....               | 6 00  |
| Chilled.....                                  | 6 55  |
| Powder, F.F., keg.....                        | 4 70  |
| F.F.G.....                                    | 5 00  |
| Pinware, pressed, retinned.....70 and 10 p.c. |       |
| " plain.....75 and 2 1/2 p.c.                 |       |
| " pieced.....                                 |       |
| Japanned ware.....37 1/2 p.c.                 |       |
| Enamelled ware, white.....45 p.c.             |       |
| " Famous.....50 and 10 p.c.                   |       |
| " Imperial.....50 and 10 p.c.                 |       |
| Green Wire Cloth.....1 55                     |       |

## PETROLEUM.

|                           |           |
|---------------------------|-----------|
| Water white American..... | 27 1/2 c. |
| Prime white American..... | 25 1/2 c. |
| Water white Canadian..... | 25 1/2 c. |
| Prime white Canadian..... | 24 1/2 c. |

## SCRAP.

|                             |                   |
|-----------------------------|-------------------|
| No. 1 cast iron.....        | \$14 to 15        |
| No. 2 ".....                | 7                 |
| Wrought iron scrap.....     | 5                 |
| Copper (heavy).....         | 8 1/2 c. per lb.  |
| Yellow brass (heavy).....   | 7 1/2 c. "        |
| Light brass.....            | 5c. to 6c. "      |
| Lead pipe, or tea lead..... | 2c. to 2 1/2 c. " |
| Zinc scrap.....             | 1c. "             |

## PAINTS, OILS AND GLASS.

|                                                |          |
|------------------------------------------------|----------|
| White lead.....\$5 00 to \$5 50                |          |
| Putty in bladder, 2 1/2 lb. in keg of 100 lbs. | 0 02 1/2 |
| Turpentine, pure, in barrels.....              | \$ 0 87  |
| Less than barrel lots.....                     | 0 92     |
| Linseed oil, raw.....                          | 0 55     |
| Boiled.....                                    | 0 58     |

## WINDOW GLASS.

|                                                                                                                                            |      |
|--------------------------------------------------------------------------------------------------------------------------------------------|------|
| Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes. |      |
| Lubricating oils, heavy castor machine.....                                                                                                | 0 29 |
| " extra engine.....                                                                                                                        | 0 27 |
| " dynamo.....                                                                                                                              | 0 35 |
| " black.....                                                                                                                               | 0 22 |
| " cylinder.....\$0 50 to 0 75                                                                                                              |      |
| (as to quality)                                                                                                                            |      |

|                                  |              |
|----------------------------------|--------------|
| Harness oil.....                 | 0 50 to 0 60 |
| Neatsfoot oil.....               | 1 00         |
| Vegetable oil, 1st pressure..... | 1 00 1/2     |
| " 2nd pressure.....              | 1 09 1/2     |

## TO STOP STREET VENDORS.

THE Montreal Board of Health will shortly consider a proposal to prohibit the sale of ice cream, candy and fruit, on the city streets. At the present time the board has authority to enforce a strict censorship over this class of trade. The performance, however, has proved more or less impracticable, hence the endeavor to remove the root of the difficulty.

In the opinion of certain of the Montreal medical health officers the principal offenders are the ice cream and candy vendors. Considerable missionary work has already been done by way of issuing official sanitary instructions among innocent offenders, and it is just possible that certain careless vendors will not be permitted to take out licenses next year. This strict censorship has been enforced among the butchers and bakers of Montreal, among whom it has worked satisfactorily. The upshot of the board of health movement will be awaited with interest.



## TRADE CONDITIONS IN MARITIME PROVINCES.

Halifax, Aug. 22, 1904.

THE Summer trade is now over and the Fall trade beginning. It is a little early yet to expect much activity, but the prospects for Fall trade are encouraging. The fishing industry, with which the hardware interests in this city are closely associated, is in a prosperous condition. It is too early to estimate the season's catch, but any shortage will be fully made up by the higher prices being obtained. The chances are that there will be a good trade during the Fall months along the shore. Apples will again be a good crop which should make good times throughout the Annapolis Valley. At Sydney the industries have not regained a normal footing, but the resumption of work has improved the outlook materially in that district. In the towns of Amherst and Springhill there has been a good deal of building operations going on, and both towns are making considerable progress. In Charlottetown the new market house is about completed. The contract for heating has been awarded to Bruce Stewart & Co., and is one of the largest of the kind ever undertaken in Prince Edward Island. There have been a number of fine residences erected in Charlottetown during the Summer. Within a year Bruce Stewart & Co., of Charlottetown, have shipped 30 engines to the Stoker Underfeed Co., of Toronto. The chief drawback to trade is the depression in lumber prices. Several failures have already resulted in the Maritime Provinces from this cause, and the coming Winter's operations will be much curtailed unless the British market improves in the next few months. The success which has attended the Nova Scotia and New Brunswick manufactures who made exhibits at the Winnipeg Exhibition is a commentary on the progress the Maritime Provinces are making in industrial pursuits.

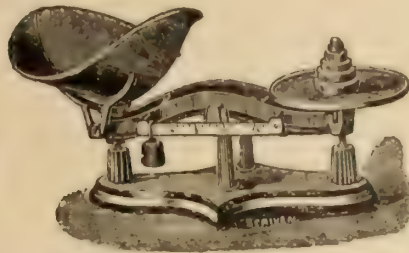
Among the newer industries is the Amherst Motor Co., which makes a specialty of the manufacture of gasoline engines for various purposes. Among recent orders filled was a 6 h. p. gasoline engine for Blackburn & Schwartz, of Melford, who are substituting this in place of their steam power. A 6 h. p. gasoline engine for J. A. & R. Niles, of Port Elgin, to be used for threshing purposes. An 8 h. p. engine and a 3 h. p. thresher for Leed & Colter, of Wallace, and a like outfit for Charles W. Hurley, of Little River.

## KINGSTON'S ELECTRIC PLANT.

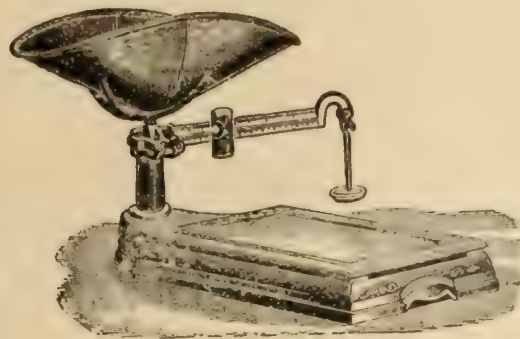
The Civic Fire and Light Committee of Kingston have decided to spend \$7,700 on temporary repairs to the electric light plant recently purchased by the city.

THE BURROW, STEWART &amp; MILNE CO.'S

## "CHAMPION JEWEL" SCALES



4 AND 10-LB. EVEN BALANCE.



240-LB. UNION.

The *most popular* and *generally useful* scales on the market.

*Thoroughly reliable and accurate.*

Made for 27 years in the *largest and best-equipped scale factory* in the Dominion of Canada. Have you seen our latest No. 60 (100 page) Catalogue of *Imperial Standard Scales*?

Write for prices and details.



MERRICK, ANDERSON &amp; CO., NORTH-WEST DISTRIBUTORS, WINNIPEG.

## CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost **must** accompany all advertisements. **In no case** can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

## YEARLY CONTRACT RATES.

|                                        |         |
|----------------------------------------|---------|
| 100 words each insertion, 1 year ..... | \$30 00 |
| " " " 6 months .....                   | 17 00   |
| " " " 3 months .....                   | 10 00   |
| 50 " " " 1 year .....                  | 17 00   |
| " " " 6 months .....                   | 10 00   |
| 25 " " " 1 year .....                  | 10 00   |

## SITUATIONS VACANT.

**MANAGER**, traveller or assistant — thorough knowledge hardware, paints and colors; 20 years' experience; thoroughly energetic; very smart salesman; total abstainer; age 35; highest credentials, "Dominion," **HARDWARE AND METAL**, Montreal. (37)

**MANAGER**, thorough knowledge hardware; 20 years' varied experience; used to organization and administration of a large corporation, undoubted ability; total abstainer; age 35. "Independence," **HARDWARE AND METAL**, Montreal. (37)

**WANTED**—Tinsmith, must be sober, reliable and industrious. Apply at once stating wages and references. Acer & Whedon, Medina, N.Y., U.S.A. (37)

**WANTED**—Stove plate moulders and boys to learn the moulding trade. The Gurney Foundry Company, Limited, Toronto. (37)

## BUSINESS CHANCES.

**HARDWARE** business wanted in live city or first-class town of not less than five thousand population, located in good farming community. Apply Box 146, **HARDWARE AND METAL**, Toronto. (25tf)

**RETAIL** hardware business for sale; one of the largest and in best location in Toronto; largely cash business; in good running order; turnover for 1903 over \$35,000; can easily be increased to \$50,000; stock and tools about \$9,000. For particulars and terms address Box 152, **HARDWARE AND METAL**, Toronto, Ont. (28ft)

## HARDWARE BUSINESS WANTED.

**HARDWARE**, stove and tin business wanted in a good, live town in Western Ontario; stock about five thousand or less. Send particulars to Box 170, **HARDWARE AND METAL**, Toronto, Ont. (36)

Don't Forget the Name...

## NEWMAN'S INVINCIBLE FLOOR SPRINGS

Strong, Quick, Reliable, Effective

Will close a door against any force. Far ahead of ordinary door springs. Otherwise, ask your wholesaler.

W. NEWMAN &amp; SONS, Birmingham.



# PAINT, OIL AND BRUSH TRADES

## Pain Brushes and Their Care.

**O**NE of the chapters in "Practical Carriage and Wagon Painting" is devoted to paint brushes, and in it are contained some very useful information on buying brushes and caring for them. The following is a synopsis of what is said:

All painters should take an interest in making up his brush equipment of brushes of the best quality. The brush made of reliable stock, having the proper hang and point, and which balances like a "thoroughbred," is an economical tool to buy, regardless of the price. Painters who do particular work require a brush made scientifically, by the outlay of honest workmanship, and of material that is wholly above suspicion. A brush that has simply the price to recommend it is usually an unreliable article and worketh evil, like a thief in the night, unexpectedly. In making choice of a brush for putting or priming, lead and rough stuff, and for such other features of general use as require a round or oval bristle brush, the painter may properly look at the filling of the tool. Deception, if practiced at all, is usually placed where it shows the least. The first-class brush is distinctively the brush that shows good quality—uniform quality—from centre to outside. Other things being equal, the brush that is made up uniformly as to its bristle equipment will develop a good point, and all painters are alive to the importance of this virtue in both paint and varnish brushes.

Much of the usefulness of a brush depends upon the manner of caring for it when it comes into the paint shop. The bristle brushes used for priming lead and rough stuff require bridling until worn down somewhat. There are many patent brush bridles now procurable at a nominal cost which tend to give a brush much better shape than the shop-made bridle. If these are not at hand the painter can take "stuffing" cord and wind the brush securely but not too tightly; or he can take a piece of light weight rubber cord and, extending the piece well down the handle, tie it at the proper distance around the bristles. Then, from where it is tied on the bristles, fold the piece back onto the handle and tie securely. Trim off and a bridle is furnished that is perfectly

water and paint proof, the cloth side of the rubber being folded inside. For a shop-made bridle this is a serviceable one.

After bridling, drop a little oil paint into the heel of the brush and set it away in a dust proof compartment for a few days. Then use the brush for a time in oil paint, suspending the brush when not in use in raw linseed oil. In the course of two or three days the brush may be put into other paint if desired and suspended in water. In suspending the brush should just be immersed in the water up to the butts of the bristles. Under no circumstances should a brush be permitted to rest upon its point when not in use. By doing so the front of the tool is destroyed and the spring and elasticity of the brush is lessened. The bristle paint brushes require a clean storage quite to the extent that color or varnish brushes do. Therefore, the receptacle in which they are kept should be fitted with a cover

and should be tight enough to keep out all forms of dirt. For ordinary brushes a common pail fitted with a cover, and having nails driven at certain distances apart all around it, on which the brushes may be suspended, makes a cheap and excellent keeper.

Camel's hair color brushes may well have a little paint, one-half oil and the other half turpentine, dropped into the heels of them. These brushes, used in Japan ground colors, need to be kept suspended in water. The water should be changed frequently. A keeper such as is before described is one of the best possible keepers for color brushes. Brushes kept in water do better in rain or soft water than in hard water. During the cold weather, where freezing is liable to occur, it is advisable to add a little glycerine to the water. The glycerine lowers the freezing point of the water and does not affect the brushes.

(Continued in our next issue.)



SEE our  
exhibit of



Maple Leaf Varnishes, Enamels.  
Stains. Dry Colors. Paste Colors,  
Hollywood Paint, etc.,

Manufacturers Building, Toronto Exhibition.

**The Imperial Varnish & Color Co.**

LIMITED.

TORONTO, ONTARIO, CANADA.





## Take a Wise Man's Advice—

It is unquestionably good business policy to identify yourself with a thoroughly reliable manufacturer and stick to him. Loss results from disloyalty and waywardness. In paints, oils, varnishes, enamels, stains, etc., tie up to The Standard Paint and Varnish Co., of Windsor.

### WIN - TRO - LAC

is a Transparent Varnish—unequalled for Oilcloths and Linoleums; renews hardwood floors, woodwork, furniture, leaving a brilliant and durable finish. Will stain and polish at one application, 15 colors, from barrels to ½ pints.

SEND FOR CATALOGUE AND PRICE LIST.

Standard Paint & Varnish Co., Limited, Windsor, Ont.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

### BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street



WE WANT YOU  
TO TRY—

### SOLARINE

SHALL WE SEND YOU  
SAMPLE ORDER?

—MONEY BACK—

“SOLARINE” POLISHES

60 George St., Toronto, Ont.

## Linseed Oil

To-day's price in London is £18 1s od. I offer 50 barrels, raw, at £17 15s od, c.i.f. Montreal, which price with duty is less than 4tc. per gallon. Also 50 barrels refined at £19 5s od, c.i.f. Montreal.

J. W. L.,

P.O. Box 1157,  
Montreal.

## McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

## Get your GLUES from

The GROVE CHEMICAL CO., Limited

Appley Bridge, Lanc. England.

Our ordinary grades are better than ordinary, and we can supply special makes for special purposes. SCOTCH GLUES, BOX GLUES, COLOGNE GLUES for Paper Makers. Size of all kinds. Send your name for our printed matter.

## We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO

MONTREAL

LONDON

OTTAWA

WINNIPEG.



## We Don't Ask Much.

We only ask for a trial order and we are satisfied that *you will ask us* for the second. “Island City” paints make their own way. Sterling quality is the secret.

P. D. DODS & CO., Montreal, Toronto, Vancouver



## Paint and Oil Markets

### Quebec.

Office of HARDWARE AND METAL,  
232 McGill Street  
Montreal, Aug. 25, 1904.

SINCE last week no startling features have been presented on the paint and oil market. A good general trade is being done in all lines. The only change of price is a rise in turpentine which has advanced another cent a gallon. We quote:

**Ground White Lead**—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

**Dry White Lead**—\$4 in casks and in kegs \$4.25.

**Dry White Zinc**—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

**White Zinc (ground in oil)**—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

**Putty**—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

**Orange Mineral**—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

**Red Lead**—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

**Litharge**—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

**Turpentine**—Single barrels, 82 1-2c per gallon; two to four barrels, 81 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

**Linseed Oil**—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

**Shellac Varnish**—Pure white, \$2.80 to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

**Mixed Paints**—\$1.20 to \$1.40 per gallon.

**Castor Oil**—8 3-4 to 9 1-4c in whole-

sale lots, and 1-2c additional for small lots.

**Canadian Paris Green**—Barrels 13 1-4c; arsenic kegs 13 1-2c; 50 and 100 lb. drums, 14c; 25-lb. drums, 14 1-4c; 1 lb. packages, 15c; 1-2-lb. packages, 17c;

**English Paris Green**—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

### Ontario.

Office of HARDWARE AND METAL,  
10 Front Street East,  
Toronto, Aug. 26, 1904.

THERE is very little change in the local market condition this week.

There is a very fair demand for white lead for this season. Usually there is quite a slump in lead at this time of the year; but this year there has not been a very appreciable falling off. The demand for mixed paints and dry colors is also very good. Paris green is quite dull, now the season being about over for it. Linseed oil on the local market is firmer this week than last, caused by the advance in the price of

seed on the Chicago market and the turn the oil market has taken in the Old Country. Last week it was declining, but this week sees the price there advancing. Although at present there is no oil being bought from England the firmness there is affecting the local market. The expected advance in the price of turpentine on the local market has not taken place as yet. The market is, however, even firmer than last week, caused by a further advance in the Southern States. However, the market there is not very firm at these advanced prices, but it is not expected that prices will decline. Glass is firm this week, an advance having taken place in Austria. However, owing to the unsettled condition on the local market there will not be any advance here it is thought.

**White Lead**—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

**Red Lead**—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

**White Zinc**—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

**Shingle Stain**—In 5 gallon lots, 60 to 85c per gallon.

## THERE'S A GREAT DIFFERENCE

between other brands and **Anchor Liquid House Paints**. It is the difference you find between ordinary White Leads and **Brandram's B. B. Genuine**, between the better and the **Best**, between the comparative and the superlative. **Anchor Liquid House Paints** are the best because **Brandram's B. B. Genuine**, the world's standard for the last 186 years, is the only White Lead used in their manufacture.



HENDERSON & POTTS, Limited, Mfrs., Halifax  
HENDERSON & POTTS CO., Ltd., Mfrs., Montreal



**Paris White**—90c to \$1 per 100 lb.

**Whiting**—60 to 65c per 100 lb.; Gilders' whiting, 75c.

**Shellac**—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

**Linseed Oil**—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

**Turpentine**—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

**Glues**—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

**Putty**—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

**Plaster Paris**—New Brunswick, \$2 per barrel.

**Liquid Paints**—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

**Barn Paints**—55 to 70c per gallon.

**Bridge Paints**—75c to \$1.

**Castor Oil**—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

**English Paris Green**—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

**Canadian Paris Green** (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

#### St. John.

Fall orders for burning oil have all been booked. Trade has been large, present prices being considered low.

Lubricating oils show a fair business; prices are unchanged. Linseed oil is firm. In fish oil the market seems unsettled with the appearance of a determined effort to bear the market.

#### Window Glass.

MONTREAL.

Business has picked up considerably during the past week, and has assumed a much more satisfactory state. There is now more glass moving than at any time since the change in tariff. Orders for Fall trade are commencing and a large business is anticipated. The prices quoted are merely nominal and we have no assurance that they are strictly followed. We quote: First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70 seventh do., \$5.20, and eighth do., \$5.70. The discount on 50 feet is 20 per cent, and on 100 feet 33 1-3 per cent. There has been no change in prices for diamond star or double thick. First break, 50 feet, \$2.30; second do., \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

TORONTO.

The market is firm or nominally so, caused by the advance in Austria. However, much cutting is being done on the local market so that prices are not expected to advance in the nominal quotations. We quote: Star first break, at \$3.80 per 100 feet, and Double Diamond, first break, at \$5.06. Discount, 15 to 20 per cent. These prices are shaded on large and well assorted specifications.

The stock belonging to the estate of Joseph Pailibert general merchant, Duck Lake, has been sold.

## At the Sign of the "CROSS "CUT "SAW"!

Why ? ?

Why do I buy the

# Canada Paint Company's Paints ?

"BECAUSE they make the house bright and wholesome.

"BECAUSE they will improve and add to the value of my customers' property.

"BECAUSE they are made in the latest and most artistic shades.

"BECAUSE they are easy to apply, being well ground to work smooth and easy.

"BECAUSE each tin is tested before shipment and contents are fully guaranteed.

"BECAUSE they have an established reputation and their sale is steadily increasing.

"TACKS AND BRADS"





**WORK AND  
PRICES  
RIGHT**

**GALVANIZING** ONT. WIND  
ENGINE & PUMP CO.  
TORONTO, ONT. LIMITED.

### TRADE WITH ENGLAND

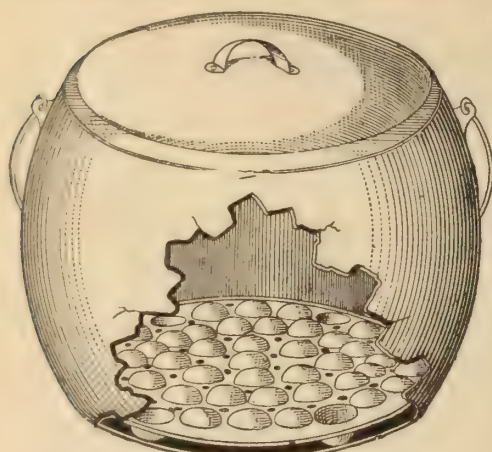
Every Canadian who wishes to trade successfully with the Old Country should read

#### "Commercial Intelligence"

(The address is 168 Fleet St., London, England.)

The cost is only 6c. per week. (Annual subscription, including postage, \$1.80.)

Moreover, regular subscribers are allowed to advertise without charge in the paper. See the rules.



#### The Standard Vituals and Boiler Protector

Manufactured of tin. No burning of vituals. No burning of boilers. No boilers to sour. Boilers last four times as long. Food cooks in three-fourths of the time.

##### QUICK SELLER

No. 1 size 6½ in. No. 2 size 7½ in. No. 3 size 8½ in.  
No. 4 size 9 in.

For sale by

E. T. WRIGHT & CO., Hamilton, Canada.

## MODERN MAGIC!



No more matches needed to light the gas.  
The "Ignite" Mantle Lights when the gas is turned on.  
Write for booklet and samples.

The International Gas Appliance Co., Limited  
146 BAY STREET, TORONTO, Canada

## STOVES AND TINWARE.

### Furnace Repairs

In every community much of the hot air furnace work done and many of the hot air furnaces used are poorly adapted for the service which their owners expect. This is often due to the failure of the owner to appropriate a sufficient amount of money in the first place to secure good work and good results. This, however, need not be a source of annoyance to the capable and enterprising hot air furnaceman. Such furnaces and such work should prove a source of revenue to him. They need repairs, and not infrequently some rearrangement of the piping will make them render far more acceptable service than has been secured from the original setting.

It is a simple matter to put new grates in the majority of hot air furnaces, but when it comes to putting in new fire pots, that is a different story, and unless the customer is informed that it will be necessary to take the entire furnace down to get the fire pot in he will think the charge made for it is excessive. When the need of a new fire pot is brought to the attention of the furnaceman, whether through his own canvassing or his customer's necessities, he can prevent disagreeable controversies by carefully explaining that it will take one or two men and the best part of a day to put in a new one, and that this expense must be added to the cost of the fire pot. People who know in advance the extent of the work they wish to have done are less apt to complain when the bill comes in, and are more ready to pay when the collector comes around or the time arrives that has been set for payment.

Some furnacemen secure a strong hook to screw into the joist of ceiling immediately above the furnace top, when it is a portable furnace, and by means of a pulley arrange to lift the top and the piping from the casing after some of the pipe fastenings have been loosened, and then can remove the furnace casings, radiator, etc., so that the setting of a new fire pot is less laborious and takes less time than if every one of the pipes had been taken down. In very many furnaces, whether portable or brick set, the radiator and upper sections can be

raised by means of a lever and held until the old fire pot is removed and the new one put in place. Where furnaces are very large and the parts very heavy, it may be necessary to send more than two men.

It only needs a little canvassing in any locality to discover many hot air furnaces that need new grates, new fire pots, new smoke pipes, or some other new parts, and the man who does this work is sure to secure many profitable orders for other work. Only a better class of workman, who is himself a high grade furnaceman, should be sent to do repair work, for many times the causes of the faulty operation of the apparatus are only discovered when he comes in contact with the women who live in the house all the time and know the troubles. He can then and there tell them what is needed or explain that with the apparatus in use no better service can be secured. His ability to dispose of such questions when the information is received will bring to the shop many profitable jobs. Even such a man should be closely under the supervision of the business, and the owner should explain to him how to do work and why he arranges work in a given way, so that his instructions will increase the efficiency of his employe.

The owner should also see to it that his workmen are equipped with a convenient variety of tools, all in good order, adapted for the many emergencies that arise when they are on a job. A little supervision as to the equipment and the instructions given to even a first rate workman and furnaceman will go a long way toward helping him to do more work in a given time or to complete work so that the best results will be derived from it. There is plenty of opportunity for a man to display his ability as a business man, as a competent furnaceman and as a good workman in the furnace repair end of his business. The reputation which he thus acquires for careful work will go a long way toward securing for him favorable consideration when his bids for new installations are somewhat above those of less competent competitors who have not demonstrated their qualification for doing satisfactory heating work.—Metal Worker.



# McArthur, Corneille & Co.

MONTREAL

## Glue and Gelatine

An extensive assortment, to suit all requirements.  
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,  
Prepared Paints, Window  
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE  
Imperial French Green  
of JOHN LUCAS & CO.,  
PHILADELPHIA.

And CELEBRATED  
English Varnishes  
of CHAS. TURNER & SON,  
LONDON.

Please mention HARDWARE AND METAL when writing.



## Your Faith

in any article is not greater than the  
maker's. Perhaps your faith in the  
goodness of

## Gillett's Lye

is so great just because the makers of  
it believe in it so enthusiastically.

E. W. GILLETT COMPANY LIMITED  
TORONTO

# Grand Idea

## The Range that never fails.

"If it's a GRAND IDEA,  
it's all right."

The Rush Season will soon be on. If you have  
not already placed your Fall Order, you will no  
doubt be doing so in a few days.

We wish again to call your atten-  
tion to the many points of excellence  
contained in our GRAND IDEA  
ranges.

We guarantee every range we  
sell to give you and your customer  
perfect satisfaction.

Grand Idea Ranges are easy to  
sell. They are good bakers, and  
their operation is simple. They are  
constructed of the very finest ma-  
terials by mechanics who understand  
every detail of their work.

If you are in the Range business  
to stay, it will pay you to  
handle the Grand Idea.



GUELPH  
FOUNDRY CO.  
LIMITED  
GUELPH, ONT.

We shall be pleased to furnish prices and descriptive matter upon request.

Western Representative: MESSRS. E. G. LOW & CO., Winnipeg, Man.



# —NOT AT THE FAIR—

We regret that we will not be able to make an Exhibit and meet our customers at Toronto Exhibition this year.

Our many friends have sent in such a number of orders that we are kept very busy day and night to fill them, and our extra volume of business during August more than counterbalances what we lost in July owing to our fire.

We are being congratulated on all sides, as no one anticipated that with buildings and plant destroyed by fire, that we could equip ourselves to continue our business with practically no interruption, and orders are now being filled with usual promptness.

Expect to have new buildings erected in the near future which will be models of convenience, and with the new machinery and new goods which we are adding, will be in better shape than ever to serve our customers.

Our motto "once a customer, always a customer," signifies our determination that we will supply what the trade wants, and in such a way that they will always want to deal with us.

We are adding some new lines which will interest you.

## The Metal Shingle & Siding Co., Limited. PRESTON, ONT.

Western Agency :  
ELLIS & GROGAN, CALGARY.

Manitoba Agency :  
CLARE & BROCKEST, WINNIPEG

Montreal Agency :  
J. B. DAGENAIS, 953 St. James St.

## We Introduced

ourselves to the Canadian trade last week through "Hardware and Metal" and wish to thank the trade this week for the reception given us. The introduction has brought us a great many enquiries.

Let us repeat that our designs in Metal Ceilings, Walls, Siding and all lines of Sheet Metal Building Material are all new, and from an artistic point of view are superior to anything on the market. Send us your enquiries and specifications for our figures.

**THE GALT ART METAL CO., Limited**  
**GALT, ONTARIO.**



Have you  
tried it?  
Tried what?  
**SELLING  
MANTELS.**



This is in your line of business, and it will  
pay you.

**The Batty Stove & Hardware Co**  
76 YORK ST., TORONTO.

## WE WANT WORK

**Old Stove Parts Re-nickled  
Like New.**

Put your Stove parts in a box and send  
to us. We do the rest.  
Good as the best. Cheap as the cheapest.

Long Distance Phone, Main 2993.

**FAIRGRIEVE MFG. CO.,**  
TORONTO.

**A PERMANENT  
and Handsome Roof.**



## Arrow Brand Asphalt Ready Roofing.

Will bring you profits to which you are entitled. Guaranteed waterproof. Will last all seasons and in all climates. Reasonable prices for the best material. Get your order without further delay.

**A. C. JENKING, Sole Agent,**  
Room 215 Coristine Building, - **MONTREAL**  
Sole agents being appointed in each district. Write today.

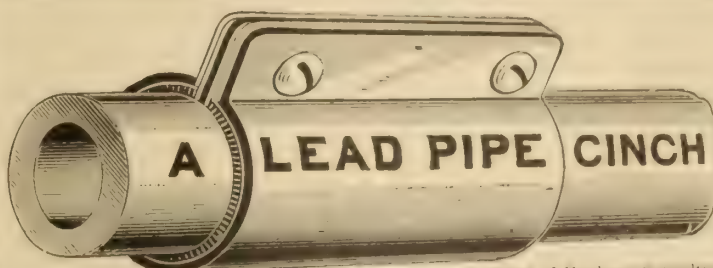
When in want of

**Hayfork Pulleys,  
Barn Door Hangers,  
Jack Screws,**

**Mrs. Potts Irons,  
Diamond Dampers,  
Etc.**

Order from

**The H. R. Ives Co., Ltd., - Montreal**



**Smith's  
Pipe Patch**

**SAVES TIME & MONEY**

**PLUMBERS' CHARGE**  
Plumbers, 1 day \$1.00  
Helper 50  
Solder 25  
Oleum 15

Smith's Pipe Patch 25  
Amount saved \$1.65

**Utica Drop Forge & Tool Co.**

Mfrs. of Nippers and Pliers

296 BROADWAY, NEW YORK CITY.

Canadian Sample Room: 215 Coristine Bldg. MONTREAL. ALLEN C. JENKING, Canadian Manager

**Smith & Hemenway Co.,**

Mfrs. of Cutlery and Hardware Specialties

# Davidson's Stove Pipe Elbows

**"HERCULES" and "STANDARD"**

Made of best polished Blue Steel Neatly crated in  
Bundles of 1 doz.



**"HERCULES"**

Made in 2 sizes only, 6 and 7 inch.

**"STANDARD"**

Made in 5, 6, 7 and 8 inch.

## "EMPIRE" STOVE PIPE

**IMPROVED  
1904 STYLE**

Made in 5, 6 and 7 inches.  
Nested in Crates of 25 each.

Simplest stove pipe to put together yet  
made. Only tools required are a pair  
of hands.

**Improved "Empire" Stove Pipes**  
are uniform in size, securing a perfect  
fit, and when put together will stay  
put together.



Patent applied for.

**The THOS. DAVIDSON MFG. CO. Limited. MONTREAL.**



# HEATING AND PLUMBING

## THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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## THE PLUMBING SUPPLIES MARKET.

### Quebec.

Office of HARDWARE AND METAL,  
232 McGill Street.  
Montreal, Aug. 23, 1904

RECENTLY the plumbing supplies market has assumed a brisker tone. This is the season of the year that a large turnover is expected and results so far have been most satisfactory. Keen competition between Canadian and American manufacturers of range boilers is still in evidence, and

continues to keep the price down. Activity continues in all lines.

**Range Boilers**—Prices continue steady, as they have reached a low stage. The demand is good. We quote as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

**Lead Pipe**—Lead pipe continues active. Prices remain firm at former quotations. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

**Soil Pipe and Fittings**—There is a brisk tone in this line, being much better than usual. Prices continue the same throughout. We quote: Light soil pipe, 3 to 6 inches, 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

**Iron Pipe and Fittings**—The market remains strong, and is quite active. As before the real prices can only be had on application, subject to concessions, we quote nominal prices as follows: Standard pipe, per 100 feet, in length under 19 feet. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1 1-4 in., \$7.35; 1 1-2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1 1-4 in., \$10.05; 1 1-2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4, and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1-2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1 1-4 in., \$10.55; 1 1-2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1 1-4 in., \$13.25; 1 1-2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy

pipe is 12 1-2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

**Solder**—There is no noted change in the price of solder this week. Bar solder is quoted at 17 1-2c, and wire at 18c.

**Soldering Irons**—Prices are as follows: 1 to 1 1-2 lbs., per lb, 37c; 2 lbs and over, 34c.

### Ontario.

Office of HARDWARE AND METAL,  
10 Front Street East.  
Toronto, Aug. 26, 1904.

THE local market still exhibits a quiet feeling, although the picking up of trade noticed last week continues. The cause for this slackness has been due principally to the holiday season, and is felt each year at this time. The plumbers are now beginning to return to business, and it is hoped that very soon the market will exhibit a much firmer feeling. There are no changes in quotations to be noted.

**Lead Pipe**—There is a fair business being done in this line, although the slackness of the general market is felt to some extent. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

**Soil Pipe and Fittings**—Trade is quiet in unison with the general market condition, but it is hoped that there will be a brisk business done in the near future. Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

**Iron Pipe and Fittings**—A very fair business is being done, considering the general quiet feeling on the market. Prices remain as quoted last week. We quote nominally: Malleable fittings, 33 1-3 to 35 per cent.; cast iron (standard), 57 1-2 to 60 per cent.; headers, 52 1-2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1-2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1-2 to 70 per cent.

**Copper Range Boilers**—A fairly good trade is being done, affected to some ex-

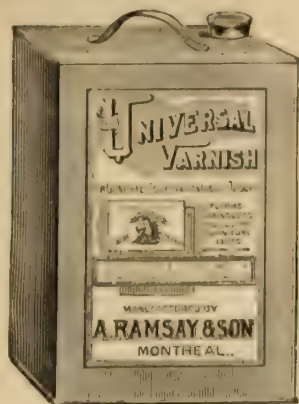


## YOUR VARNISH TRADE.

RETURNED

SEP 15 1904

Cut Book 23.

Page 60  
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Try a varnish that will sell and keep its reputation, while making customers for you.

Let it be a varnish already established, long tried and proved.

Then you make a profit, as good varnishes pay the dealer well.

### RAMSAY'S UNIVERSAL

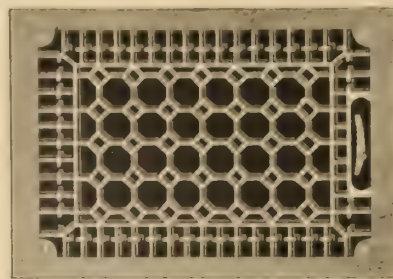
is a seller, returns handsome profits, makes a reputation, satisfies all. It's for boats, counters, desks, doors, carriages, floors, etc. Ask for our booklet explaining about the rebate that goes with each can to your customer and how we pay it—not you.

**A. RAMSAY & SON**  
MONTREAL

EST'D  
1842

**VARNISH**  
MAKERS

## "REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER

## THE FERROSTEEL COMPANY,

BRIDGEBURG, ONT. and CLEVELAND, OHIO,

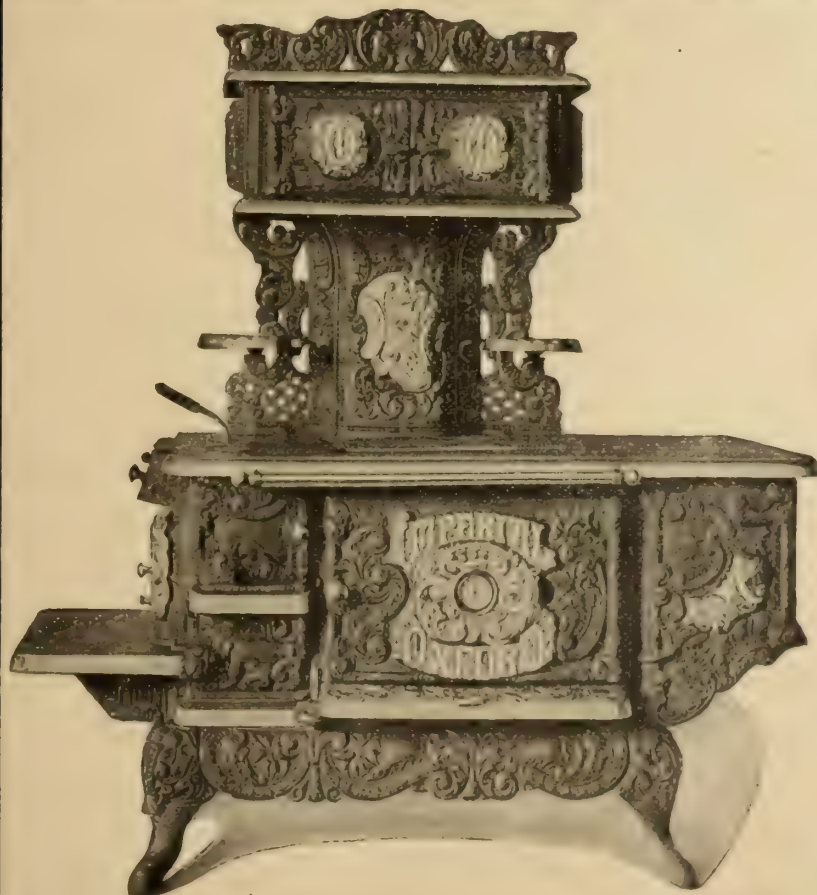
OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular Illustrating our SIDE WALL REGISTERS on application.



There is a reason for the big demand for Imperial Oxford Ranges. That reason is found in the merit of the range. There is not a stove on the market that is so favorably known as the

## Imperial Oxford Range

Everyone who has used one speaks well of it. That is the best kind of advertising there is. The dealers who handle it are enthusiastic about it. Ask any of them about it. Then ask us for particulars.

**The Gurney Foundry Co., Limited,**  
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:  
**THE GURNEY-MASSEY CO., LIMITED,**  
MONTREAL, QUE.

**THE GURNEY STANDARD METAL CO., Limited**  
CALGARY, ALTA.



tent by the general slackness prevailing. Discounts at 15 per cent. continue on the new prices issued some time ago.

**Iron Pipe**—Competition in this line has not been quite so keen during the last three or four weeks. Business is somewhat quiet, but dealers look for it to pick up soon. Prices are quoted unchanged since last issue. We quote: f. o. b. Toronto was follows: Black pipe, 1-8 in., \$1.85 to \$1.95; 1-4 in., \$1.90 to \$2.05; 3-8 in., \$2 to \$2.25; 1-2 in., \$2.25 to \$2.35; 3-4 in., \$2.85 to \$3; 1 in., \$4 to \$4.25; 1-1-4 in., \$5.75 to \$6; 1-1-2 in., \$7 to \$7.25; 2 in., \$10; 2-1-2 in., \$18; 3 in., \$21; 3-1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.35 to \$2.80; 3-8 in., \$2.80 to \$3; 1-2 in., \$3.15 to \$3.25; 3-4 in., \$4 to \$4.10; 1 in., \$5.90 to \$6; 1-1-4 in., \$8.25 to \$8.50; 1-1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

**Enamelled Ware**—Prices are firm, and a fairly active trade is being done. We quote: "Standard." 5-1-2 feet, 2-1-2 in. rolled rim, first quality, at \$21.60; second quality \$16.35.

#### Freezing a Service Pipe.

**I**N "Plumbing and House Draining Problems" the following answer is given to the question as to whether in the case where work had to be done on a system which contained no means of shutting off the water from the building, it would be safe to stop the water by freezing the service pipe:

If the service pipe is made of lead there is very little danger of bursting the pipe by freezing it when there is a chance for the water in the pipe to expand in both directions from the point where it is frozen. The work of freezing the pipe is comparatively simple, as are also the appliances that will be needed for doing it. The pipe can be frozen in from half an hour to an hour, depending upon its size and whether or not the water is running at the time freezing is attempted. If it is an ordinary pipe of  $\frac{1}{2}$  to  $\frac{3}{4}$  inch diameter there will be very little difficulty.

To freeze the pipe it is necessary to surround it with a mixture of ice and salt, and a simple and good way to keep this material in contact with the pipe would be to secure a small box of about 16 inches in length, 12 or 14 inches in width and about 12 inches deep. Saw notches in each end of the box about one-half the depth of the box, and of sufficient width to slip over the pipe. The box should then be moistened with water and made water tight by being daubed with clay. The box should be placed in position around the pipe and

firmly supported. The notches should be made water tight with clay. Then by breaking the ice into quite small pieces, smaller than chestnut coal, and mixing it with a liberal sprinkling of common salt, and filling the box with this, the freezing is only a question of time. It is a simple matter to tell when the pipe is sufficiently frozen to work by driving a small nail into the pipe to see if water comes out. If water leaks out the hole should be closed and more time given for the freezing mixture to act.

#### Boiler Furnace Temperature.

**T**HE maintenance of a sufficiently high temperature in the combustion chamber of a boiler furnace is absolutely essential in the burning of fuels containing ten per cent. or more of volatile hydrocarbons, says a writer in Domestic Engineer, and it may be ignored only when using coke or anthracite fuels. Unfortunately, boiler engineers have not generally recognized this condition in the construction or setting of boilers, and nine-tenths of the factory smoke produced may be ascribed to the failure to maintain proper furnace temperature. The water-tube boiler makers are the chief offenders in this respect. In most of their boilers, as at present constructed and set, perfect combustion of the fuel can be obtained only when using anthracite coal. When ordinary bituminous fuels are used in such boilers, the volatile hydrocarbons which distil from the grate, even when mixed with a sufficiency of air, are brought too quickly into contact with the boiler tubes, and the temperature of the gases is thus greatly reduced before perfect combustion has had time to take place. It is not sufficient to have a mixture of the inflammable gases and air for perfect combustion to ensue. These gases must not only be mixed, but they must also be maintained at or above a temperature known as the combustion temperature. This temperature for the hydrocarbons distilled from coal is given by different observers as between about 940 and 1,200 degrees Fahr. The obvious method of obtaining this temperature is to provide a combustion chamber lined with some refractory and non-conducting material which will not allow heat to be dissipated before perfect combustion of the gases has occurred. Badly designed boilers may be made suitable for burning bituminous fuels without any very great capital outlay, and good results have been obtained with such modified forms of setting.

#### Building Notes.

The Thomas Always Hall Home for Children in London, Ont., is now nearing completion.

Work has been started on a large flour mill in Peterboro, Ont., being built by W. H. Meldrum.

The new factory of the Toronto Laundry Machine Co., Toronto, is in course of erection near the Dundas street bridges.

It is reported that Geo. A. Graham, of the Iroquois Hotel, Toronto, contemplates the erection of a large hotel to rival the King Edward of that city.

The contract for the erection of a new city hall and power house at Moose Jaw, N. W. T., has been awarded to Dessin & Co., Minot, U. S. A., for \$41,260.

The Union Stock Yards Co., Toronto Junction, still have the project in mind of building a large hotel on Keele street, near the office building of the company, to cost about \$60,000. The building will be erected mainly for the accommodation of the patrons of the market. At present accommodation is provided in the office building.

The Independent Phone Manufacturers Co., of Chicago, propose to erect a factory for the manufacture of all kinds of telephone supplies in Windsor, Ont. The factory will be run in connection with the Ontario Independent Telephone Co., which is trying to secure a franchise in different Canadian cities. At the start 150 hands will be employed.

#### Building Permits.

##### TORONTO.

M. A. Marshall, dwellings on Montrose ave., \$4,500.

S. J. Graydon, dwelling on Spadina ave., \$5,000.

John Foley, dwellings on Brooklyn ave., \$2,800.

G. T. Graham, dwellings on Wilson ave., \$4,500.

R. E. Kennerer, dwellings on Simpson ave., \$4,800.

Geo. Kellam, dwelling on Palmerston ave., \$2,600.

Wm. Williamson, dwelling on Adelaide street, \$3,800.

Geo. Wellings, factory on Richmond street, \$2,000.

J. A. Walker, dwellings on Beatrice street, \$4,000.

Jas. H. Wickett, dwellings on Sackville Place, \$4,200.

Louisa Shimmer, addition to dwelling on Church street, \$1,000.

The Vokes Foundry and Steel Co., foundry on corner of Jarvis and Esplanade, \$3,000.

##### MONTREAL.

S. Gagnon, City Hall ave., one dwelling, \$4,000.

Napoleon Deslaurier, St. Denis street, one dwelling, \$8,000.

Jas. Brown, Drummond street, alteration on one house, \$300.

Patterson Mfg. Co., St. Hubert street, one factory, \$16,000.

Mrs. A. A. Denman, Rivard street, alteration on one house, \$1,000.

F. J. Chartier, Notre Dame street, alterations on two houses and four stores, \$4,000.



# THE "GOOD CHEER"



## Art Base Burner

We are again preparing for another big run on this stove, but the demand has exceeded the supply every season so far, so order in good time, and if you have not yet seen this stove get a sample NOW, then follow up quick with your order, and we will see that you get them promptly.



There is nothing  
"just as good"  
made yet  
—nor likely to be.

IT HAS  
**NO  
FAULTS**

Firepot removable  
without turning a  
single bolt.  Has  
Has Duplex Grate  
and large ash pan.  
Every stove a  
Double Heater.   
Has Steel Oven.  
With or without  
oven.

The JAMES STEWART MFG. CO., Limited  
Woodstock, Ont. and Winnipeg, Man.



# INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

**T**HE foundry and bridge manufacturing establishment of W. P. MacNeil & Co. has been removed from New Glasgow, N.S., to Hawkesbury, Ont., where a plant to cost between \$35,000 and \$50,000 will be erected.

• • •

The Railway Spring and Supply Co., Limited, Montreal; capital, \$49,000; purpose, to manufacture and deal in railway, steamboat, mill, contractors' and builders' supplies and to manufacture and deal in general hardware, machinery, springs and axles, etc. The directors are Jas. Ross, C. Coughlin, F. D. Shallow, P. M. Wickham, J. A. Rowan, all of Montreal.

• • •

Canadian Lowe, Coke and Gas Co., Limited, Montreal; capital, \$1,000,000; purpose, to manufacture and deal in all kinds of apparatus for the production of gas and coke and electrical power, and to manufacture and supply electrical power, gas and coke. The directors are W. G. Macalister, W. J. Henderson, W. G. Mitchell, G. E. Clark, G. H. Semple, all of Montreal.

• • •

Two men employed by the Canada Iron Furnace Co. were injured by a pile of iron falling on them when loading a vessel at Midland last week and died from the effects. This company have been singularly free from accidents of any kind. John J. Drummond, the superintendent, has always taken such care to avoid mishaps that this is the first he has had under him in 32 years. The men under him say that if there is any dangerous work to be undertaken he will allow no one but himself to do it.

• • •

The first annual report of the lighting and power system of the city of Guelph, under municipal ownership, as adopted by the City Council, shows a profit of \$10,146, after providing for maintenance, interest on debentures and depreciation. The report shows that the expenses of management were \$500 less than the average of the five years of private ownership, while the capacity of the gas plant had been increased 20 per

cent., and of the incandescent plant one-third. The business amounted to \$46,000, as against \$42,000 in the previous

\* \* \*

year, and the bad debts were but \$11.

The total export of pulp wood in 1901 was \$1,758,049, an increase over 1903 of \$229,489. The total export of pulp shows a decrease of 23 per cent., the value being \$2,409,074 as compared with \$3,150,943 during the previous year, the falling off being chiefly in the export to Great Britain, which decreased from \$1,129,173 to \$548,720, and in exports to other countries from \$226,002 to \$52,912. Canada's total exports of paper, however, rose from \$849,519 to \$1,097,212, an increase of \$247,692. Of total quantity exported during 1904 Great Britain took \$447,672 worth, United States \$263,000 worth, and other countries \$486,531.

\* \* \*

At a meeting held in Hanover, Germany, of the directors of the Gelsenkirchen Coal Co., the Schalker Coal & Iron Co. and the Aachen Smelting Co., it was decided to pool the interests of the three companies, the Gelsenkirchen Company increasing its capital to \$31,875,000, and exchanging its shares for shares of the other companies. The Aachen Company, which is capitalized at \$2,875,000, owns large foundries, steel works and rolling mills at Roteerde and mines at Lothringen and Luxemburg. The agreement, which is subject to the ratification of the shareholders, assigns \$6,375,000 to the Schalker stockholders and \$7,750,000 to the Aachen owners.

• • •

W. M. Barber, 92 Langley avenue, Toronto, has purchased the patent for a new system of peat manufacture for Canada, United States and Mexico. The process is an English one and is electrical. It is briefly as follows: Rotary iron cylinders are firmly filled with the green peat, and while the cylinders are rotating at high pressure, beating fans force out the water, of which some 80 per cent. is contained in virgin peat. The electric current is turned on. The current pulverizes the material without any loss. The disintegrated peat is passed through a set of rollers on to a

kneading apparatus, where a teasing manipulation is applied, to bring the mass into a putty-like or plastic condition. In this state it readily concentrates or contracts into any form or shape.

## NOTES.

A most promising discovery of copper has been made in the Black Bay District, near Port Arthur.

The Victor Varnish Co., Toronto, have made application for a permit to erect a factory on Elsie avenue.

The powers of the Consolidated Plate Glass Co., Limited, have been extended to include the manufacture of all kinds of glass and mirrors.

The Dominion Tar and Chemical Co. have under consideration the erection of a large plant in Sydney for the creosoting of timber in Cape Breton.

The Rock Lake Mining Co., Sault Ste. Marie, Ont., have been wound up. The applicants for the order put the liabilities at \$200,000, and claim that they exceed the assets.

Large extensions will be made to the plant of the Aylmer Iron Works Co., Aylmer, Ont. Much new machinery will be installed and the company will extend their lines of manufacture.

The American Steel and Wire Co. have issued a circular announcing that a cut in steel and wire products has gone into effect. The reduction in the various grades averages about \$5 a ton. The cut effects all products except nails and billets.

At the recent meeting of the Goderich Brick and Cement Company, the following officers were elected to succeed the provisional directors: President, Wm. Proudfoot; vice-president, J. P. Brown; secretary-treasurer, James A. McIntosh; directors, Wm. Marlton and George Thomson.

## COMPANIES INCORPORATED.

The Berlin Real Estate Co., Limited, Berlin, Ont.; capital, \$300,000; purpose to carry on the business of a land company. The directors are S. E. Moyer, J. B. Bingeman, J. G. Stabler, J. G. Berchhaupt and Chas. Zinelsdorf, all of Berlin.

The Western Cordage Co., Limited, London; capital, \$300,000; purpose, to manufacture and sell binder twine, yarn, rope and all kinds of cordage. The directors are D. J. Cowan, T. H. Pindom, J. Geary, all of London; Wm. Pickard, Seaforth, Ont.; G. A. Routledge, Lambeth, Ont.; T. E. Robson, Elderton, Ont.; W. T. Chambers, Toronto.



CHARLES BAYNES, England.  
 MAKER OF THE KNUZDEN BROOK, BLACKBURN,  
**"CLICK-CLACK"**  
 HACK SAW BLADES.  
 In Factory Solely Devoted to Making Hack Saw Blades. **NONE BETTER.** In All sizes of Best English Steel.

The Hanover Portland Cement Co., Limited  
 HANOVER, ONTARIO.

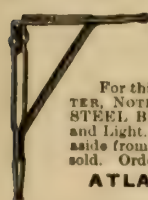
Manufacturers of **"Saugeen Brand"**  
 OF PORTLAND CEMENT.  
 Prices on application.

## "THE EMLYN" SAW BENCH

Made in 6 sizes. Best value obtainable. Specially designed for export With or without "Emlyn" Patent Guard. Sole maker—

CHARLES D. PHILLIPS,

Cables— Emlyn Engineering Works  
 "Machinery," Newport. NEWPORT, MON., ENGLAND



## Will Hold Up a Shelf !

That's what a shelf bracket is for.  
 For this purpose there can be NOTHING BETTER, NOTHING CHEAPER than the BRADLEY STEEL BRACKET. It is well Japanned, Strong and Light. The saving in freight is a good profit, aside from the lower price at which the goods are sold. Order direct or through your jobber.

ATLAS MFG. CO.,

New Haven, Conn., U.S.A.

## Books for Hardware Men

The American Hardware Store.

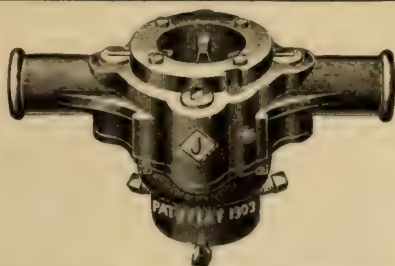
By R. R. Williams; 576 pages; 6 3/4 x 10 inches; 660 illustrations; bound in cloth .....\$3.00

Hardware Store Business Methods.

A series of articles dealing with business methods in the hardware store, by different authors; 227 pages; 5 1/2 x 8 inches; illustrated; cloth binding .....\$1.00

Enquiries for above books should be sent to

Book Department, **HARDWARE AND METAL**  
 TORONTO.



It is a fact that one man with our **PATENT PIPE DIE** can easily do the work of two men with any other. Send us your address and we will explain HOW and WHY.

**A. B. JARDINE & CO.**

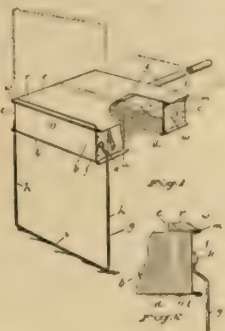
Mfrs. TAPS and DIES.

HESPELER, ONT.

# PIG IRON FOR IMPORT.

Carnbroe, Summerlee, Gartsherrie and Middlesboro', Glengarnock.

Henry Rogers, Sons & Co., Montreal, P.Q.



## All Canada a Big Country

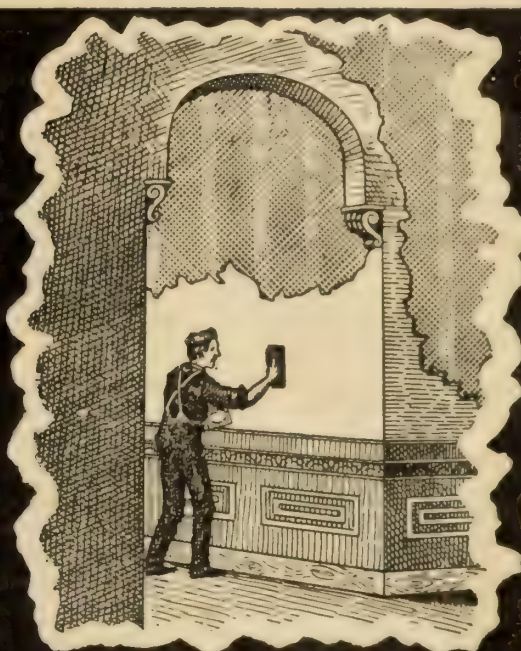
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Sells for 25c. retail, and a bargain at that.

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On and after September 1st, 1904, the prices on "Perfect" Metal Lath will be as follows:

26 gauge 10c. per square yard.

24 gauge 13c. per square yard.

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## WHAT SPLIT THE LOG?

THERE is nothing like giving a boy a little encouragement once in a while," said a wealthy down-town merchant, the other day. "I know I owe a great deal to a remark a crabbed old farmer made to me when I was quite small.

"I was trying to split a cross-grained hickory log, and as our wood pile was close by the roadside, my efforts attracted the notice of the farmer, who stopped his team.

"I was greatly flattered by his attention, because he was the crossdest and surliest man in town, and never took any notice of us boys, except to sit in his orchards with a shotgun in his hand when the apples were ripe. So I put in my best licks, and covered my hands with blisters, but the log refused to split. I hated to be beaten, but there seemed no help for it. The old man noticed my chagrin.

"Humph! I thought you'd have to give it up!" he said, with a chuckle.

"Those words were all I needed.

"I made no reply; but the way that axe-head went into that log was a revelation to me. As I drove it into the knots, they yielded. There was a cheerful crackle, the gap widened, and soon the halves lay before me, and the farmer drove off discomfited.

"But I never forgot that scene. When I first went into business, I made mistakes, as every young man will. But whenever I got caught in a doubtful enterprise, I remembered that my friends were standing around waiting for the chance to say, 'I thought you'd have to give it up!'

"In spite of himself, that old farmer gave me the key-note of my success.

"So you see that if a boy has any grit in him, he is bound to profit by the right sort of encouragement; and in that connection I may remark, a well-placed sneer is often worth more than a barrel of taffy."

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The United States Consul at Birmingham, England, says that Messrs. Witherington & Sons, millers, of Reading, have made a comparison between the cost of carriage by steam motor and that by horse-drawn vehicles. In 1902 they had seven horses, and the expense of them for the year was \$2,530.58. At the end of 1902 they sold the horses and purchased a 5-ton steam machine, ran it 5,272 miles, carried 3,870 tons, and burned 411.2 tons of coal, at the total cost of \$1,849.27, including interest on the original car and also depreciation

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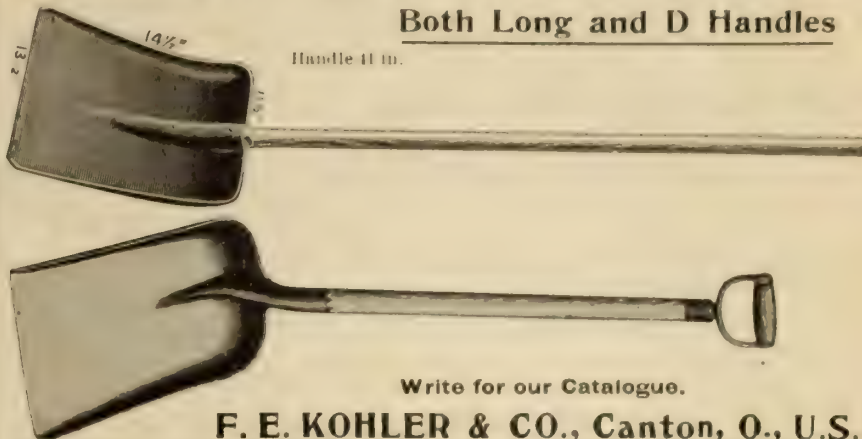
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Both Long and D Handles



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Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.

### PAINTS AND OILS.

#### COLORS IN OIL.

| 1-lb. tins, pure.      |      |
|------------------------|------|
| Venetian red, per lb.  | 0 08 |
| Chrome yellow          | 0 15 |
| Golden ochre           | 0 08 |
| French                 | 0 06 |
| Marine black           | 0 04 |
| Chrome green           | 0 10 |
| French permanent green | 0 13 |
| Signwriters' black     | 0 15 |

#### COLORS DRY.

| Pure in bbls., per cwt.          | Less than this quantity to extra |
|----------------------------------|----------------------------------|
| Common ochre, bbls.              | 2 50                             |
| Yellow ochre                     | 1 12 1/2                         |
| Brussels ochre                   | 2 75                             |
| Venetian red                     | 1 50                             |
| English oxides                   | 3 00                             |
| American oxides                  | 1 25                             |
| Canadian red oxides              | 1 50                             |
| Super magnetic oxides, 93 p.c.   | 2 00                             |
| Burnt sienna                     | 9 00                             |
| Raw umber                        | 6 00                             |
| Drop black                       | 12 00                            |
| Chrome yellow                    | 0 18                             |
| Chrome green                     | 5 50                             |
| French green                     | 0 09                             |
| Golden ochre                     | 2 75                             |
| Ultramarine blue, in 28-lb. bxs. | 7 00                             |
| Fire proof mineral               | 1 00                             |
| Genuine Eng. Litharge            | 4 50                             |
| Mortar color                     | 1 00                             |
| Pure Indian red, lb.             | 0 99                             |
| Whiting, bbl.                    | 9 65                             |
| English vermilion in 30-lb. bgs. | 0 85                             |

#### WHITE LEAD.

| Pure                          | Per 100 lb. |
|-------------------------------|-------------|
| No. 1                         | 4 75        |
| No. 2                         | 4 50        |
| No. 3                         | 4 25        |
| No. 4                         | 3 75        |
| Munro's Select Flake White    | 4 75        |
| Elephant and Decorators' Pure | 4 75        |
| Monarch                       | 5 00        |
| Decorators' Pure              | 4 75        |
| Essex Genuine                 | 4 25        |
| Sterling Pure                 | 5 00        |
| Island City Pure              | 5 00        |
| Ramsay's Pure Lead            | 4 75        |
| Ramsay's Exterior             | 4 50        |

#### RED LEAD.

|                                  |        |
|----------------------------------|--------|
| Genuine, 560 lb. casks, per cwt. | \$4 25 |
| Genuine, 100 lb. kegs.           | 4 75   |
| No. 1, 560 lb. casks, per cwt.   | 4 00   |
| No. 1, 100 lb. kegs, per cwt.    | 4 25   |

#### WHITE ZINC.

|                |      |
|----------------|------|
| Extra Red Seal | 0 06 |
| French V. M.   | 0 06 |
| Lehigh         | 0 06 |

#### DRY WHITE LEAD.

|              |      |
|--------------|------|
| Pure, casks  | 4 25 |
| Pure, kegs   | 4 50 |
| No. 1, casks | 4 00 |
| No. 1, kegs  | 4 25 |

#### PREPARED PAINTS.

| In 1/2 and 1-gallon tins.       |      |
|---------------------------------|------|
| Pure, per gallon                | 1 20 |
| Second qualities, per gallon    | 1 00 |
| Barn (in bbls.)                 | 0 60 |
| The Sherwin-Williams paints     | 1 30 |
| Canada Paint Co.'s pure         | 1 25 |
| Toronto Lead & Color Co.'s pure | 1 25 |
| Sanderson Pease's pure          | 1 20 |
| Standard Co.'s "New Era"        | 1 30 |
| "Globe" barn                    | 60   |
| Francis-Frost Co.'s "Ark" B'd   | 1 25 |
| "British Navy deck              | 1 50 |
| Henderson & Potts's "Anchor"    | 1 35 |
| Ramsay's paints, Pure, per gal. | 1 20 |
| "Thistle"                       | 1 00 |
| "Outside, bbls.                 | 55   |
| Island City House Paint         | 1 25 |
| "Floor"                         | 1 25 |
| Sterling House Paint            | 1 20 |
| "Floor"                         | 1 10 |
| National                        | 1 05 |

### PUTTY.

|                                            |      |
|--------------------------------------------|------|
| Bulk in bbls.                              | 1 45 |
| Bulk in less quantity                      | 1 70 |
| Bladders in bbls.                          | 1 70 |
| Bladders in kegs, boxes or loose           | 1 85 |
| 25-lb. tins                                | 1 80 |
| 12 1/2 lb. tins                            | 2 05 |
| Bladders in bulk or tins less than 100 lb. | 1 85 |

### VARNISHES.

| In 5-gal. lots.                           | Per gal.        | Net. |
|-------------------------------------------|-----------------|------|
| Carriage, No. 1                           | 1 50            | 1 60 |
| Pale durable body                         | 4 10            | 4 25 |
| "rubbing                                  | 2 85            | 3 20 |
| Gold size, Japan                          | 1 50            | 1 60 |
| No. 1 brown Japan                         | 0 85            | 0 90 |
| Elastic oak                               | 1 50            | 1 50 |
| Furniture, extra                          | 1 10            | 1 25 |
| "No. 1                                    | 0 90            | 1 00 |
| Hard oil finish                           | 1 35            | 1 50 |
| Light oil finish                          | 1 60            | 1 70 |
| Damar                                     | 1 75            | 2 00 |
| Shellac, white                            | 2 40            | 2 50 |
| "orange                                   | 2 30            | 2 40 |
| Furpentine, brown Japan                   | 1 10            | 1 20 |
| "black Japan                              | 1 10            | 1 20 |
| "No. 1                                    | 0 85            | 0 90 |
| Elastilite varnish, 1 gal. can, each      | 2 00            |      |
| Granite floor finish, per gal.            | 2 75            |      |
| Maple Leaf coach enamels; size 1,         | \$1.20          |      |
| size 2, 70c; size 3, 40c each             |                 |      |
| Sherwin-Williams' kopal varnish, assorted |                 |      |
| case, from                                | 1 gal., \$2.50. |      |

### GLUE.

|                  |      |          |
|------------------|------|----------|
| Common           | 0 08 | 0 08 1/2 |
| French medall.   | 0 10 | 0 14     |
| White, extra     | 0 18 | 0 22     |
| Gelatin          | 0 18 | 0 20     |
| Strip            | 0 18 | 0 20     |
| Coopers          | 0 19 | 0 20     |
| Huttner          |      |          |
| Ground           | 0 12 | 0 16     |
| Cologne, genuine |      |          |

### HARDWARE.

#### AMMUNITION.

##### Cartridges.

|                                                                                                                      |  |
|----------------------------------------------------------------------------------------------------------------------|--|
| R. B. Cape Dominion, 50 and 5 and 25 per cent.                                                                       |  |
| Rim Fire Pistol, discount 30 p.c., American                                                                          |  |
| Rim Fire Cartridges, Dominion, 50 and 5 p.c.                                                                         |  |
| Central Fire, Military and Sporting, American, old 20 per cent. to list. B.B. Caps, discount 40 per cent., American. |  |
| Central Fire Pistol and Rifle, 5 p.c., Amer.                                                                         |  |
| Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.                                                        |  |
| Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.                                               |  |
| Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount                                         |  |
| Rival and Nitro, 10 per cent. advance on list.                                                                       |  |
| Brass Shot Shells, 55 per cent.                                                                                      |  |
| Primers, Dom., 30 per cent.; American, \$1.75                                                                        |  |

#### Wads.

|                                                                                     | per lb. |
|-------------------------------------------------------------------------------------|---------|
| Best thick brown or grey felt wads, in 1-lb. bags                                   | \$0 70  |
| Best thick white card wads, in boxes of 500 each, 12 and smaller gauges             | 0 99    |
| Best thick white card wads, in boxes of 500 each, 10 gauge                          | 0 35    |
| Thin card wads, in boxes of 1,000 each, 12 and smaller gauges                       | 0 20    |
| Thin card wads, in boxes of 1,000 each, 10 gauge                                    | 0 25    |
| Chemically prepared black edge grey cloth wads, in boxes of 250 each                | Per M.  |
| 11 and smaller gauge                                                                | 0 60    |
| 9 and 10 gauges                                                                     | 0 70    |
| 7 and 8 "                                                                           | 0 90    |
| 5 and 6 "                                                                           | 1 10    |
| Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each |         |
| 11 and smaller gauge                                                                | 1 15    |
| 9 and 10 gauges                                                                     | 1 40    |
| 7 and 8 "                                                                           | 1 65    |
| 5 and 6 "                                                                           | 1 90    |

### ADZES.

|                             |          |
|-----------------------------|----------|
| Discount 20 per cent.       |          |
| Wright's, 80-lb. and over   | 0 10 1/2 |
| Hay Budden, 80-lb. and over | 0 09 1/2 |
| Brook's, 80-lb. and over    | 0 11 1/2 |

### APPLE PARKERS.

|                                |      |
|--------------------------------|------|
| Woodyatt Hudson, per doz., net | 4 50 |
|--------------------------------|------|

### Gilmour's, discount 65 and 5 per cent. off list.

### AXES.

|                          |             |
|--------------------------|-------------|
| Chopping Axes            |             |
| Single bit, per doz.     | 7 00 10 00  |
| Double bit               | 10 00 18 00 |
| Bench Axes, 40 per cent. |             |
| Broad Axes, 25 per cent. |             |
| Hunters' Axes            | 5 50 6 00   |
| Boys' Axes               | 6 25 7 00   |
| Splitting Axes           | 7 00 12 00  |
| Handled Axes             | 10 00       |

### AMERICAN AXE AND TOOL CO.

|                                        |      |
|----------------------------------------|------|
| Red Ridge, boys', handled              | 5 75 |
| "hunters"                              | 5 25 |
| Underhill American Bench Axes, 40 p.c. |      |

### AXLE GREASE.

|                     |             |
|---------------------|-------------|
| Ordinary, per gross | 6 00 7 00   |
| Best quality        | 10 00 12 00 |

### BELLS.

#### Hand.

|                      |  |
|----------------------|--|
| Brass, 60 per cent.  |  |
| Nickel, 55 per cent. |  |

#### Cow.

|                                          |  |
|------------------------------------------|--|
| American make, discount 63 1/2 per cent. |  |
| Canadian, discount 45 and 50 per cent.   |  |

#### Door.

|                                                        |           |
|--------------------------------------------------------|-----------|
| Gongs, Sargent's                                       | 5 50 8 00 |
| Peterboro', discount 50 and 10 per cent. off new list. |           |

#### Farm.

|                |           |
|----------------|-----------|
| American, each | 1 25 3 00 |
|----------------|-----------|

#### House.

|                   |           |
|-------------------|-----------|
| American, per lb. | 0 35 0 40 |
|-------------------|-----------|

### BELLOWS.

|                                     |            |
|-------------------------------------|------------|
| Hand, per doz.                      | 3 35 4 75  |
| Moulders, per doz.                  | 7 50 10 00 |
| Blacksmiths', discount 40 per cent. |            |

### BELTING.

|                                                      |  |
|------------------------------------------------------|--|
| Extra, 60 per cent.                                  |  |
| Standard, 60 and 10 per cent.                        |  |
| No. 1, not wider than 6 in., 60, 10 and 10 per cent. |  |

#### Agricultural, not wider than 4 in., 75 per cent.

### RITS.

#### Auger.

|                                        |  |
|----------------------------------------|--|
| Gilmour's, discount 60 per cent.       |  |
| Rockford, discount 50 and 10 per cent. |  |
| Jennings' Gen., net list.              |  |

#### Car.

|                            |  |
|----------------------------|--|
| Gilmour's, 4 1/2 per cent. |  |
|----------------------------|--|

#### Expansive.

|                       |  |
|-----------------------|--|
| Clark's, 40 per cent. |  |
|-----------------------|--|

#### Gimlet.

|                           |           |
|---------------------------|-----------|
| Clark's, per doz.         | 0 65 0 90 |
| Diamond, Shell, per doz.  | 1 00 1 50 |
| Nail and Spike, per gross | 2 25 5 20 |

### BLIND AND RED STAPLES.

|                    |               |
|--------------------|---------------|
| All sizes, per lb. | 0 07 1/2 0 12 |
|--------------------|---------------|

### ROBLES AND NUTS.

|                                            |           |
|--------------------------------------------|-----------|
| Carriage Bolts, common (\$1 list)          |           |
| " " 3/16 and 1/2                           | 60 and 10 |
| " " 5/16 and 3/4                           | 55 and 5  |
| " " 7/16 and up                            | 55 and 5  |
| " " full sq. (\$2.40 list)                 | 60        |
| " " Norway Iron (\$3 list)                 | 60        |
| Machine Bolts, all sizes, 1/2 and less     | 60        |
| Machine Bolts, 7/16 and up                 | 60        |
| Plough Bolts                               | 55 and 5  |
| Blank Bolts                                | 55 and 5  |
| Bolt Ends                                  | 55 and 5  |
| Sleigh Shoe Bolts                          | 70        |
| Cow Screws, cone point                     | 70        |
| Nuts, square, all sizes, 4c. per lb. off.  |           |
| Nuts, hexagon, all sizes, 4c. per lb. off. |           |
| Store Rods per lb., 3/4 to 6c.             |           |

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| " " 7/16 and up                            | 55 and 5  |
| " " full sq. (\$2.40 list)                 | 60        |
| " " Norway Iron (\$3 list)                 | 60        |
| Machine Bolts, all sizes, 1/2 and less     | 60        |
| Machine Bolts, 7/16 and up                 | 60        |
| Plough Bolts                               | 55 and 5  |
| Blank Bolts                                | 55 and 5  |
| Bolt Ends                                  | 55 and 5  |
| Sleigh Shoe Bolts                          | 70        |
| Cow Screws, cone point                     | 70        |
| Nuts, square, all sizes, 4c. per lb. off.  |           |
| Nuts, hexagon, all sizes, 4c. per lb. off. |           |
| Store Rods per lb., 3/4 to 6c.             |           |

### ROBLES AND NUTS.

|                                            |           |
|--------------------------------------------|-----------|
| Carriage Bolts, common (\$1 list)          |           |
| " " 3/16 and 1/2                           | 60 and 10 |
| " " 5/16 and 3/4                           | 55 and 5  |
| " " 7/16 and up                            | 55 and 5  |
| " " full sq. (\$2.40 list)                 | 60        |
| " " Norway Iron (\$3 list)                 | 60        |
| Machine Bolts, all sizes, 1/2 and less     | 60        |
| Machine Bolts, 7/16 and up                 | 60        |
| Plough Bolts                               | 55 and 5  |
| Blank Bolts                                | 55 and 5  |
| Bolt Ends                                  | 55 and 5  |
| Sleigh Shoe Bolts                          | 70        |
| Cow Screws, cone point                     | 70        |
| Nuts, square, all sizes, 4c. per lb. off.  |           |
| Nuts, hexagon, all sizes, 4c. per lb. off. |           |
| Store Rods per lb., 3/4 to 6c.             |           |

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|                                            |           |
|--------------------------------------------|-----------|
| Carriage Bolts, common (\$1 list)          |           |
| " " 3/16 and 1/2                           | 60 and 10 |
| " " 5/16 and 3/4                           | 55 and 5  |
| " " 7/16 and up                            | 55 and 5  |
| " " full sq. (\$2.40 list)                 | 60        |
| " " Norway Iron (\$3 list)                 | 60        |
| Machine Bolts, all sizes, 1/2 and less     | 60        |
| Machine Bolts, 7/16 and up                 | 60        |
| Plough Bolts                               | 55 and 5  |
| Blank Bolts                                | 55 and 5  |
| Bolt Ends                                  | 55 and 5  |
| Sleigh Shoe Bolts                          | 70        |
| Cow Screws, cone point                     | 70        |
| Nuts, square, all sizes, 4c. per lb. off.  |           |
| Nuts, hexagon, all sizes, 4c. per lb. off. |           |
| Store Rods per lb., 3/4 to 6c.             |           |

### ROBLES AND NUTS.

|                                            |           |
|--------------------------------------------|-----------|
| Carriage Bolts, common (\$1 list)          |           |
| " " 3/16 and 1/2                           | 60 and 10 |
| " " 5/16 and 3/4                           | 55 and 5  |
| " " 7/16 and up                            | 55 and 5  |
| " " full sq. (\$2.40 list)                 | 60        |
| " " Norway Iron (\$3 list)                 | 60        |
| Machine Bolts, all sizes, 1/2 and less     | 60        |
| Machine Bolts, 7/16 and up                 | 60        |
| Plough Bolts                               | 55 and 5  |
| Blank Bolts                                | 55 and 5  |
| Bolt Ends                                  | 55 and 5  |
| Sleigh Shoe Bolts                          | 70        |
| Cow Screws, cone point                     | 70        |
| Nuts, square, all sizes, 4c. per lb. off.  |           |
| Nuts, hexagon, all sizes, 4c. per lb. off. |           |
| Store Rods per lb., 3/4 to 6c.             |           |

### ROBLES AND NUTS.

|                                           |           |
|-------------------------------------------|-----------|
| Carriage Bolts, common (\$1 list)         |           |
| " " 3/16 and 1/2                          | 60 and 10 |
| " " 5/16 and 3/4                          | 55 and 5  |
| " " 7/16 and up                           | 55 and 5  |
| " " full sq. (\$2.40 list)                | 60        |
| " " Norway Iron (\$3 list)                | 60        |
| Machine Bolts, all sizes, 1/2 and less    | 60        |
| Machine Bolts, 7/16 and up                | 60        |
| Plough Bolts                              | 55 and 5  |
| Blank Bolts                               | 55 and 5  |
| Bolt Ends                                 | 55 and 5  |
| Sleigh Shoe Bolts                         | 70        |
| Cow Screws, cone point                    | 70        |
| Nuts, square, all sizes, 4c. per lb. off. |           |







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| Claus Shear Co. ....                   | 4                   | International Stock Food Co. ....       | 16                 |                                       |                     | Sterne, G. F., & Son. ....             | 73                  |
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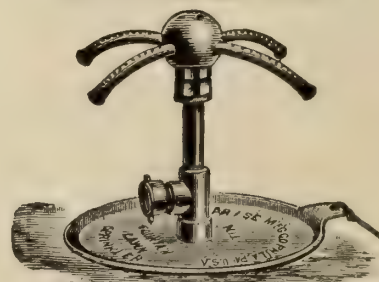
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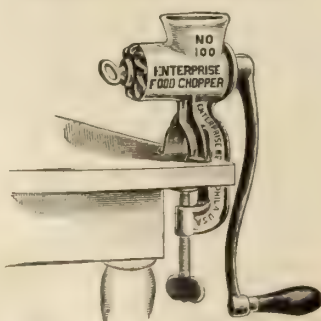
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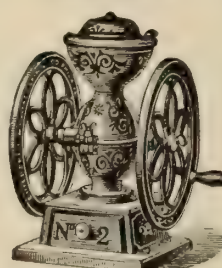
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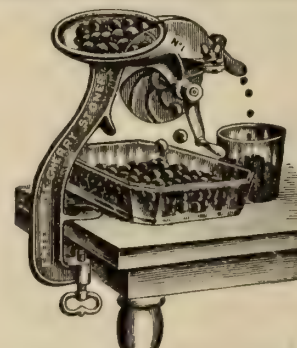
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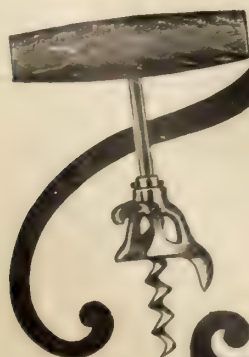
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Made with Long Fire Travel in a heavy Steel Radiator.  
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Its price enables you to compete with any Furnace on the market.

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WE CAN SHIP PROMPTLY.

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# "Redstone" Sheet Packing.

For use in highest pressures for Steam, hot or cold Water and Air. Packs equally well for all. No trouble with leaky joints when they are packed with "**REDSTONE.**" The most satisfactory packing on the market. Try a sample lot and be convinced of its merits.

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**Montreal, Toronto.**



# HARDWARE AND METAL

## AND CANADIAN MACHINIST

A Weekly Newspaper devoted to the Hardware, Metal, Machinery,  
Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, SEPTEMBER 3, 1904.

NO. 36

BUTCHERS' KNIVES  
**JOHN WILSONS**  
CELEBRATED  
"PEPPERCORN AND DIAMOND"  
BRAND CUTLERY.  
TRADE MARK  
BUTCHERS' STEELS

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THE STANDARD OF THE WORLD.



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are made in Canada only by us. You can always  
tell the genuine iron by the name "Woodyatt"  
stamped thereon. It is distinguished from the  
non-genuine by the loose or detachable plate on  
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in that it enables the iron to retain the heat far better than the non-genuine solid iron. Then,  
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are interchangeable. The retailer who handles our make can make a sale every time; he can't  
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Find out its uses. Fortify yourself with knowledge. So prepared you can sell many an extra can—make many an extra penny.

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**The Canadian Rubber Co.**  
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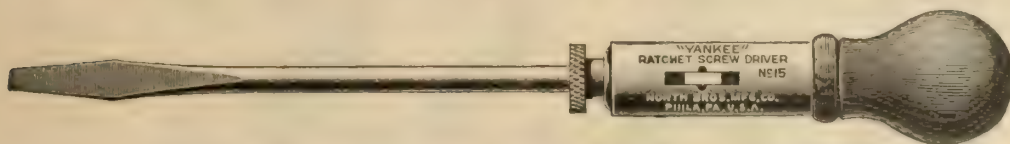
**Head Office : : MONTREAL**

**BRANCHES—TORONTO, WINNIPEG and VANCOUVER**

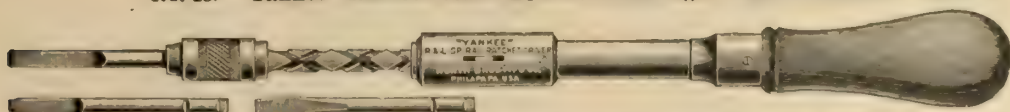
Other Tools are very  
good Tools, but

**“YANKEE TOOLS”**

ARE  
BETTER



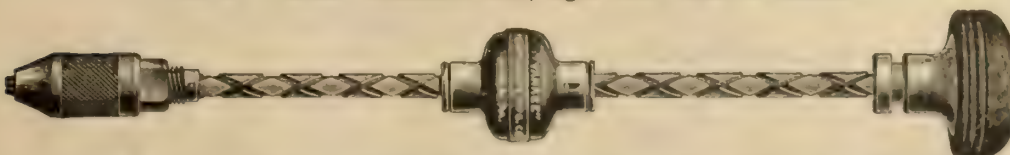
No. 15. “Yankee” Ratchet Screw Driver, with Finger Turn on Blade.



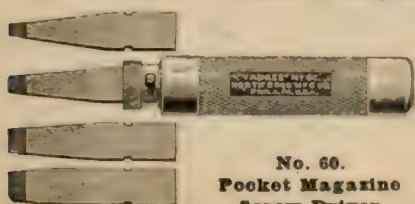
No. 30. “Yankee” Spiral-Ratchet Screw Driver, Right and Left Hand.



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**Sold by Leading Jobbers  
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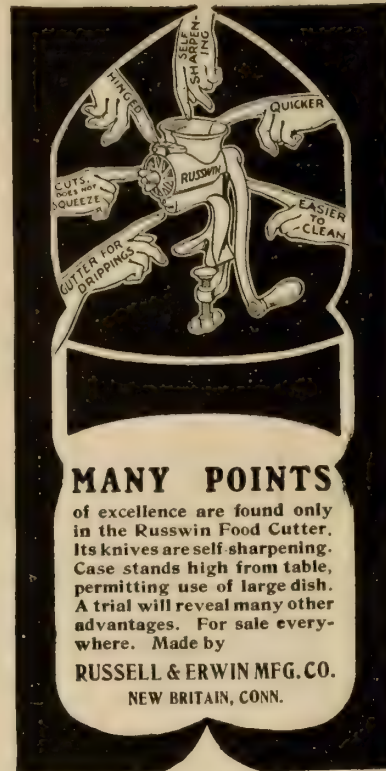
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**TUBES**

**M. & L. Samuel, Benjamin & Co.**

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English House—16 Philpot Lane, LONDON, ENGLAND.



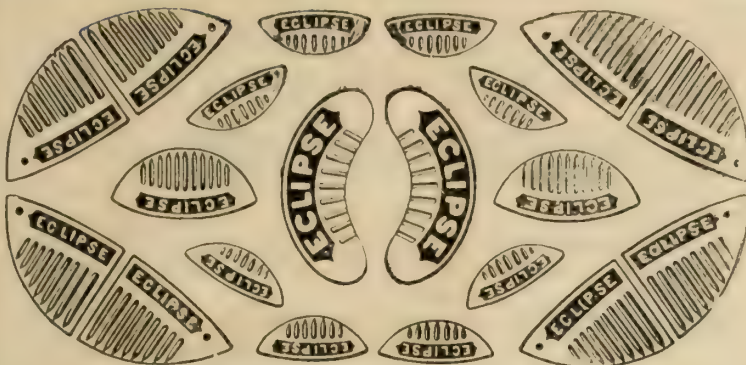
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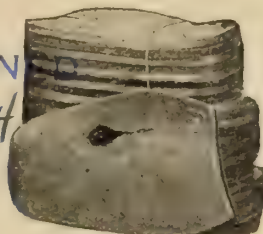


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If you use the right kind of bait and cast your line where the kind of fish you want are most plentiful, you'll quite likely get a number of bites.

Then if you go about it right you are pretty sure to land most of them.

Apply the illustration to business.

If you want to catch the hardware trade, cast your line where all the good hardwaremen in Canada congregate every week—looking for bait to build up their businesses with—in **HARDWARE AND METAL**. But

Suppose results don't come at first  
What be yew goin' tur dew?  
Take out yewr ad, and kick yewrself,  
An' go ter feelin' blow?  
Uv course yew hain't; yew re goin' tew fish,  
An' bait an' bait again;  
Bimeby some nibbles n bites'll come,  
Then yew'll pull 'em in.

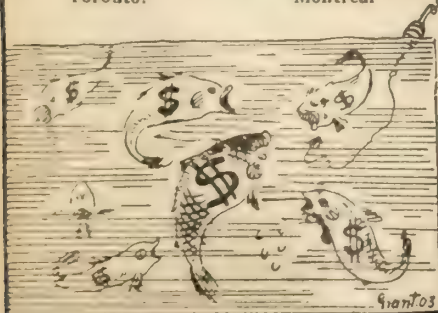
Our Department of Advertising Service is now providing good bait for a number of our advertisers—and stands ready to help a few more in this connection.

Drop us a line about it.

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Department of Advertising Service

If you use, make, or buy repetition parts made from the bar, in Brass, Steel or Iron, in fair quantities, it will most likely save you money to let us make them for you. Anyway, we will be much pleased to quote you for comparison, if you will favor us with samples, limits you require and quantities you use. We can promise good deliveries, too.

## THE ACME LATHE & PRODUCTS CO., LTD.

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Established 1815

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Agents for Canada: A. Ramsay & Son, Montreal

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ACKNOWLEDGED THE BEST.

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"QUALITY UNQUESTIONED."

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Illustration shows the  
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Also made in CLOSED RING, THREE CHAIN  
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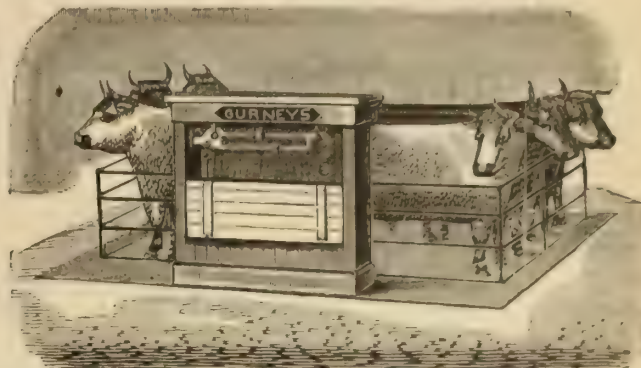
Oneida Community Cow Ties can be had of all  
the leading jobbers. We invite correspondence  
where any difficulty is experienced in obtaining  
our goods.

**ONEIDA COMMUNITY, Limited.**  
NIAGARA FALLS, ONT.

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Absolutely Accurate and Reliable. The Best of Material  
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We make scales of every description. Established 1856.  
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U.S. PATENT



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These Cow Ties  
have stood the  
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Undoubtedly the  
best and strong-  
est on the mar-  
ket.

It will pay to handle only the best.

A complete line of all sizes ready for shipment.

For Sale by all Jobbers.

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FOR ALL PURPOSES.

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**WIRE** OF ALL KINDS  
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Lawn Sprinkler**

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DUNDAS, CANADA.

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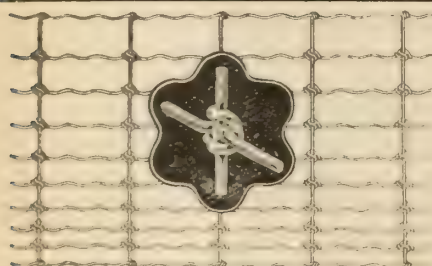
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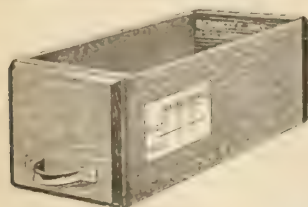
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Is Strong and Durable, because Large Gauge (No. 9) Steel Galvanized Wire is used throughout. SEE OUR EXHIBIT AT PRINCIPAL FAIRS, or write for Catalogue.

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Sole agents for Man. and N.W.T.



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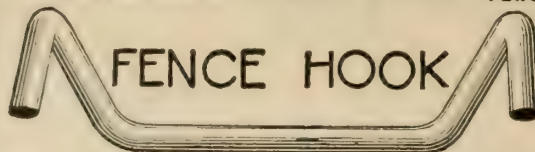
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FOR FASTENING WOODEN PICKET ON WIRE  
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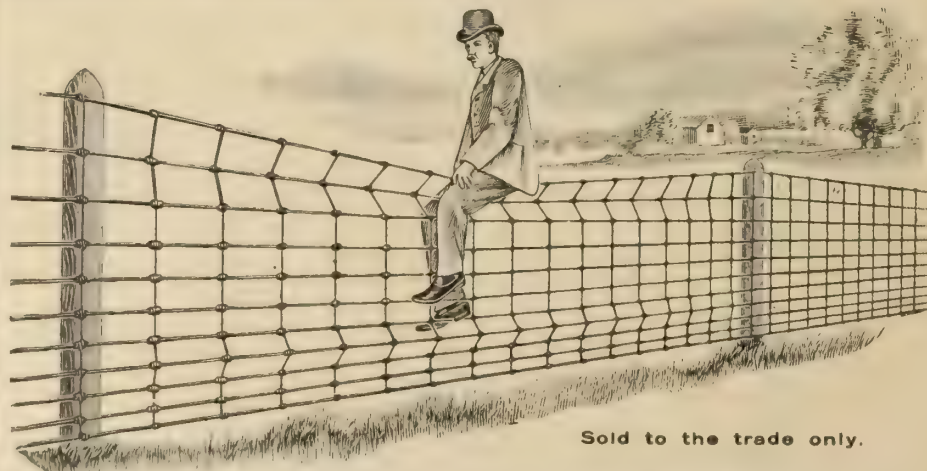
STRONGEST TRAPS MADE. PRICES EXACTLY RIGHT.

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THE HINGE IS COMPLETE, AND  
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**C**ordage  
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**N**et Mountings,

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**E**xtra Long Lengths,

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**C**ore Rope,

**O**il Well Cables,

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**C**lothes Lines,

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**D**angerous to use Inferior Cordage.

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**TRUE BRAND**  **CUTLERY**  
**POCKET CUTLERY, RAZORS, SCISSORS,**  
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**E. F. WALTER & CO.,** 166 and 168 McGill St., **Montreal**

PRICE is a good thing,—but,  
QUALITY is better.

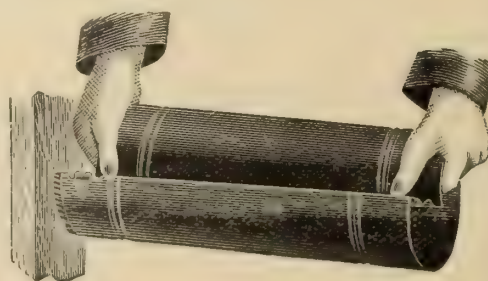
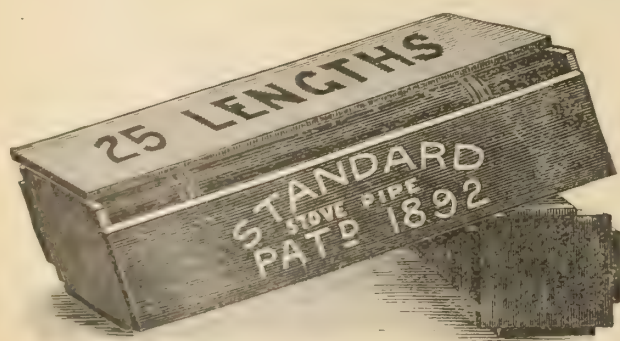
Wilcox Door Hangers Combine Both.

WRITE FOR CATALOGUE AND PRICES.

**Wilcox Mfg. Co. of Ontario, Limited**  
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## Kemp's Standard Stove Pipe { Nestable }

Easily put together, requiring neither rivets nor tools  
 Uniform in size, securing a perfect fit.



We carry in stock a full line of metals, comprising Canada Plate, Galvanized Iron and Black Sheets, also Tinplate, etc., which we are at all times prepared to supply at lowest market prices.

**KEMP MANUFACTURING CO., TORONTO, Canada**



# A PLEA FOR THE MANUFACTURES OF ONTARIO.

By an Ontario Manufacturer.

THE Province of Ontario, with its extended coast line, its numerous harbors and its extensive railway systems, with its natural endowment of ores

and useful minerals and its comparative density of population, is eminently fitted to become a manufacturing province. It is the ambition of every Canadian to assist in the development of the natural resources of his country and that development succeeds best which follows natural lines of progress. Just as Manitoba is destined to become the granary of Canada, so by nature is Ontario fitted to become its workshop.

As the natural topography of a country, by its distribution of waterways and by its mountain barriers, determines the lines of travel, as climatic conditions determine the industries of the population, so the political geography of any country may make or mar its destinies. It is the duty of the Government to study the resources of the country, to encourage the importation of those raw materials which can be manufactured advantageously within their own boundaries and to discourage by specific taxation the importation of finished products which have been manufactured by foreign labor and capital.

In this connection it is well to consider the combined effect of natural geography and political geography on the future of Ontario. Ontario, above all things, needs cheap power. With abundant labor, proximity of ores and metals, splendid shipping facilities and a good home market, the one thing needful for her industrial development is cheap power. As waterpower is limited in location and application, this means cheap coal. Unfortunately, the nearest coal in Canada is in Nova Scotia, one thousand miles to the east, while the nearest coal in the United States is in the Pittsburgh district, three hundred miles to the south.

Just as naturally as the flow of water down a valley is the flow of coal from this Pittsburgh district to Ontario, and

just as futile as an attempt to make the water flow up hill is the attempt to bring coal into Ontario from Nova Scotia.

In the year 1902 the sale of soft coal from Nova Scotia mines amounted to 4,621,074 tons. Of this production 968,832 tons were sold in the United States, but not one ton was sold in Ontario. The freight charge would be prohibitory.

The soft coal consumption of Ontario as given by Dominion Bureau of Statistics was 3,525,425 tons in 1903. The Department of Commerce and Labor of the United States gives the shipments of coal from lower lake ports to Ontario, as 3,494,930 tons in the same year. These figures agree very closely and prove that Ontario buys from the United States each year some three and one-half million tons of bituminous coal.

This coal costs at the mine about 80 cents to \$1 a ton. Freight rates by rail average about five-tenths of a cent per ton per mile. This makes the cost of Pittsburgh coal in Cleveland \$2, in Buffalo \$2.25 and in Rochester \$2.40 a ton.

The effect of geographical situation acts here as a handicap upon the manufacturing development of those cities. Placing them in order of proximity to the coal mines, we may form a table showing the geographical disadvantage which each city is under.

|                 | Cost at Mines. | Freight. | Total. |
|-----------------|----------------|----------|--------|
| Pittsburg ..... | \$1 00         | \$ .25   | \$1 25 |
| Cleveland ..... | 1 00           | 1 00     | 2 00   |
| Buffalo .....   | 1 00           | 1 25     | 2 25   |
| Rochester ..... | 1 00           | 1 40     | 2 40   |

The industrial or manufacturing interests of these cities are affected in the order as shown, giving Pittsburg an immense advantage and placing it in the first rank of manufacturing cities on the continent.

Coming across the border into Ontario we may show the same effect of geographical situation on the cities of Ontario.

Assuming that soft coal is brought in by Suspension Bridge and that the freight from the mine to the border is

\$1.30 a ton, we have the following natural costs of coal:

|                      | Cost at Mine. | Freight. | Total. |
|----------------------|---------------|----------|--------|
| Suspension Bridge .. | \$1 00        | \$1 30   | \$2 30 |
| St. Catharines ..... | 1 00          | 1 70     | 2 70   |
| Hamilton .....       | 1 00          | 1 80     | 2 80   |
| Toronto .....        | 1 00          | 1 90     | 2 90   |
| Brantford .....      | 1 00          | 2 00     | 3 00   |
| St. Thomas .....     | 1 00          | 2 20     | 3 20   |
| Stratford .....      |               |          |        |
| London .....         |               |          |        |
| Guelph .....         |               |          |        |
| Woodstock .....      |               |          |        |
| Chatham .....        | 1 00          | 2 30     | 3 30   |
| Orillia .....        | 1 00          | 2 40     | 3 40   |
| Barrie .....         |               |          |        |
| Collingwood .....    |               |          |        |
| Goderich .....       |               |          |        |
| Warton .....         |               |          |        |
| Kingston .....       | 1 00          | 2 55     | 3 55   |
| Gravenhurst .....    | 1 00          | 2 55     | 3 55   |
| Brockville .....     | 1 00          | 2 80     | 3 80   |
| Cornwall .....       | 1 00          | 3 05     | 4 05   |
| North Bay .....      |               |          |        |
| Ottawa .....         | 1 00          | 3 30     | 4 30   |

These circles of increased cost widen with Niagara Falls as a centre, until they reach a point on the east where Nova Scotia coal can be brought in at the same or cheaper rates.

Outside of special conditions such as the presence of water power; the possession of harbor facilities or the occurrence of deposits of minerals or cheap wood supply, these geographical limitations determine the progress of a town as a manufacturing centre.

Added to these natural limitations which are surmountable only by cheapening of freight rates, we have the handicap imposed by the Government tax of 53c per ton on imported bituminous coal.

## NOT A PROTECTIVE DUTY.

This tax cannot properly be called a protective duty, since in the case of coal Nova Scotia needs no protection. She exports already over half a million tons of soft coal a year to the United States and is by her geography protected against any importation of American coal. As Montreal is so far distant from the Pittsburgh coal fields that the railway freight alone is \$3.30 a ton, it is evident that the addition of 53c per ton duty is not needed to protect Quebec against coal from the United States. The only effect of the duty on the Provinces of Quebec and Ontario is to make the cost of coal higher, and we



have the combined effect of freight and duty as a handicap to manufacturing industries in these provinces. A comparison of the cost of coal at various distances from the Pittsburg coal field will show the effect of the double check on industrial growth.

|                 | Mine Cost. | Freight. | Duty. | Total. |
|-----------------|------------|----------|-------|--------|
| Pittsburg.....  | \$1 00     | \$ 20    | ....  | \$1 20 |
| Cleveland.....  | 1 00       | 1 00     | ....  | 2 00   |
| Buffalo.....    | 1 00       | 1 25     | ....  | 2 25   |
| Rochester.....  | 1 00       | 1 40     | ....  | 2 40   |
| Hamilton.....   | 1 00       | 1 80     | \$ 53 | 3 33   |
| Toronto.....    | 1 00       | 1 90     | 53    | 3 43   |
| Brantford.....  | 1 00       | 2 00     | 53    | 3 53   |
| London.....     | 1 00       | 2 20     | 53    | 3 73   |
| Barrie.....     | 1 00       | 2 40     | 53    | 3 93   |
| Peterboro.....  | 1 00       | 2 55     | 53    | 4 08   |
| Brockville..... | 1 00       | 2 80     | 53    | 4 33   |
| North Bay.....  | 1 00       | 3 05     | 53    | 4 58   |
| Ottawa.....     | 1 00       | 3 30     | 53    | 4 83   |

These are the figures of actual cost of delivery at various points, and show plainly the effect of the duty in militating against the industrial welfare of Ontario.

On the bituminous coal used by Ontario the duty amounts to \$1,855,000 per year. As the Dominion and Provincial Governments spend more than this in assisting the development of water-power, or railways and of other industries, it cannot be considered that the retention of this tax is a matter of importance. When we consider that the average freight rate on coal is about one-half a cent per ton per mile, it is evident that the amount paid in duty is equivalent to moving a ton of coal a hundred miles. By the retention of this duty, we place our manufacturing cities one hundred miles further from the source of our power; we draw a dead line one hundred miles wide around our borders; we practically move Hamilton to Barrie and Toronto to Gravenhurst. We try to alter the position of our cities by digging canals to them. We spend millions in an endeavor to cut off a few miles of travel and cheapen the rates of freight. All this is simply our endeavor to place our cities a few miles nearer to the mines and to the markets, and yet with all this governmental struggle to keep our towns to the front, we voluntarily push them one hundred miles further back to the woods by the imposition of this tax on coal. Let us clear our minds of the idea that by this tax Ontario is helping the lower Provinces. Nature has already placed a barrier of distance against the importation of coal to these provinces, a barrier so powerful that the important manufacturing cities of Quebec can be counted on the fingers of one hand. The Maritime provinces have their own coal

and no American competitor within a thousand miles.

#### ONTARIO CRIPPLED TO NO PURPOSES.

Ontario is crippled for no benefit of herself or others; crippled in her efforts to expand, to become the manufacturing centre of the Dominion, for, as Lord Beaconsfield pointed out many years ago, no country can become a great country which does not possess a cheap source of coal.

The effect of the higher price of coal in Canada is shown in its decreased consumption. In the Dominion reports, it is shown that the total coal consumed has risen slowly from 1.14 tons per inhabitant per year in 1896 to 1.5 tons in 1900. The coal consumed in the United States at the time of the last census in 1900 was 3.3 tons per inhabitant per year. In the United Kingdom the consumption was 5 tons per head in this same year. The relative importance of these countries in relation to manufacturers is in exact accordance with the coal consumption recorded. Coal is emphatically the cornerstone of a nation's industries. The cheaper it is obtained, the greater is its consumption, and the greater the output of that nation's manufactures. Any attempt to increase our manufacturing industries without decreasing the cost of coal is an attempt to reverse the laws of nature.

The duty of coal paid by the citizens of Ontario amounts to \$1,855,000 a year. This amount at 5 per cent. interest would guarantee the issue of \$37,000,000 in bonds which would pay for the construction of 1,200 miles of railway.

The Dominion Government have guaranteed the bonds of many railways and canals, have spent millions in an endeavor to bring our cities into closer business relations and yet have deliberately placed a barrier of one hundred miles of freight between us and the source of power on which all our industries are dependent.

We ask for no favors from the Government, except the right to retain our geographical advantage. We seek no benefits that would in any way militate against the coal interest in the eastern and western provinces. We ask simply the removal of unnatural restrictions and the chance to take that position in the march of progress for which nature and industry have so eminently fitted our Province of Ontario.

#### THREE CLERKS OUT OF THIRTY.

"THERE is one way to make a good salesman," said a veteran hardware manager of men, "and that is to catch them young. I have three good clerks with me, who began as office boys."

"Do you make a good man out of every office boy who tries it on with you?" was asked.

"The average will run about one in ten," was the answer. "At least I have tried about thirty youngsters in getting the three salesmen whom I have just mentioned. The American boy is too restless in these days to hold on when he has a chance at a good thing, and wants to let go and go in for something else, and one great trouble is that the average merchant takes too little interest in the new boy, and instead of training him, lets him tumble up any way that may happen. It is a duty an employer owes to a youngster who is put for the time in his charge, that he should help that boy to make a fair start in his business life."

#### HARDWARE HINTS.

Stoves and Hardware Reporter credits the following choice card signs to a Michigan hardware dealer:

"Ho! Everyone that thirsteth. We can supply the hose."

"No flies on us. We sell door screens and window screens."

"Keep it shady! We will take your order for the awnings."

"Do not want to go on a bat? Here are the baseball goods."

"This is a hot political year. We will take your order for electrical fans."

"Our store is full of all sorts of goods. Come in and take your pick. Everything from a toothpick to a pickaxe."

## WIRE NAILS TACKS WIRE

Prompt Shipments

**The ONTARIO TACK CO.**  
Limited  
HAMILTON, ONT.



## CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

## "Perfection" Stoves and Ranges.

**T**HE general catalogue and price list of the James Smart Mfg. Co., Limited, Brockville and Winnipeg, describes and illustrates Perfection stoves, ranges, hollowware, the "Kelsey" warm air generator, hot air furnaces, registers, house furnishings, hardware, etc. The first 11 pages are devoted to the Regal Perfection Range; the next 7 to the Perfection B. Wood Range, the next 4 to the Acme Perfection B.; the next 2 to the Saxon Boy; and so on right through their whole range of stoves and ranges. Twenty-one pages are devoted to describing and illustrating the "Kelsey" warm air generator. The points of advantage claimed for this heater are: The large radiating surface, the perfect combustion of fuel, the conveying of cold air through hollow sections, the absence of heat radiation in the cellar. The catalogue is completed with illustrations and descriptions of registers and ventilators, tin stove furniture, hollow ware, fire bricks, shovels, stove pipe dampers, clothesline wire, hammers, traps, tinner's snips and other tinner's supplies, pressing irons and stands, clothes wringers, floor mops, choppers, lamps and burners, and other hardware specialties.

## Supplies and Tools.

The Northwest Machinery & Iron Co., Limited, Winnipeg, are sending out a very comprehensive catalogue of blacksmiths' and carriage makers' tools and supplies. It contains 104 pages, 8x5½ inches. A few of the lines described and illustrated are: Hammers of all kinds, hoof parers and shears, cutting nippers, pinchers, tongs, chisels, bolt clippers, foot vices, shoeing vice and bolt header, butteris, axle setter and straightener, nut wrenches, graduated tire wheels, iron wrench, stocks and dies, screw plates, bolt cutters and nut tappers, pipe threaders, drilling machines, forges, blowers, tuyere irons, vices, anvils, tire bending machines, tire shrinkers, gasoline engines, foot power hammers, punching presses, pipe cutters, foot grinding machines, band saws, wood trimmers, wood lathes, planer and jointer, saw benches, shingle machines, emery stand, wrenches and mandrels.

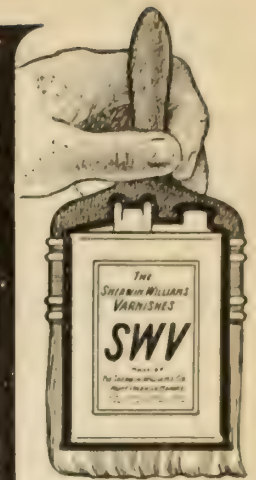
## Points of Interest at St. Louis.

The Northern Electrical Mfg. Co., Madison, Wis., are sending out a little booklet describing in brief their exhibit at St. Louis, followed by a list enumerating and locating the different machines in the electrical and machinery buildings which are driven by their motors. The booklet is accompanied by



## A Varnish Talk to S.W.P. Agents

A Few Words  
About the Big  
Advertising on  
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VARNISHES**



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We have just started the initial work of the campaign. Strong, business-getting advertising is now being mailed direct to the painters, architects, contractors, householders, and other varnish consumers in the Dominion. We will steadily continue this special advertising, increasing our appropriation from time to time. We will never let up in our efforts until S.W.V. is as well known as S.W. P.

If you are handling S.W.V. make sure your stock is big enough for a big fall business. If you happen to be one of the very few S.W. P. agents who are not yet handling S.W.V. write us today for full information.



**THE SHERWIN-WILLIAMS Co.**  
PAINT AND VARNISH MAKERS.

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WAREHOUSES: 86 York St., Toronto, Ontario; 147 Bannatyne St., East, Winnipeg, Manitoba.

1248

a map. To any one going to visit St. Louis and wishing to make a study of electric drive, this booklet would probably prove useful in locating the different exhibits of that class.

## Exhaust Steam Utilized.

Warren, Webster & Co., Camden, N. J., have issued a very comprehensive and handsome catalogue called "Exhaust Steam Utilized to Effect Economy or Increase of Power and How!" It is divided off into sections, each section dealing with a separate subject. The first section deals with the Webster "Star Vacuum" feed water heater and purifiers in general. The chief contents of this portion are: Descriptions of feed water heaters, good, better and best; some figures and results; loss due to back pressure; complete descriptions and illustrations of the "Star Vacuum" feed water heater and purifier, and its parts, some testimonials. The second section describes the Webster system of steam circulation for heating purposes at or below the pressure of the atmosphere. The description is most complete and very interesting. This section is ended with 35 pages of illustration of building where this system of circula-

tion is used. The general work on this catalogue is high-class, both the illustrating and typographical. The style of the catalogue is very neat and attractive, and is also quite unique in some respects.

## Reversing Valves.

The Weilman-Seaver-Morgan Co., engineers and manufacturers, Cleveland O., are sending out a catalogue illustrating and describing the Porter Patent Water-gas furnaces heating furnaces, glass furnaces, open hearth furnaces, crucible furnaces, soaking pits, etc. This firm are the sole manufacturers and selling agents for this valve. The water seal is the important feature of this valve, as it simplifies the construction considerably and is also very efficient in preventing the leakage of gas. The operation of the valve is as follows: Swinging arms are pivoted on the shaft carried by the base and located below the water line. In reversing the current of gas or air, the inner end of the swinging arms are moved through an arc of a circle, thus lifting the hood from the water seal at one end of the casing and lowering it into the water seal at the other end.



## Business Changes

### ONTARIO.

**T**HE Rat Portage Lumber Co., Limited, Rat Portage, has sustained loss by fire at Norman.

Windsor Papaer Box Co., Windsor, have sold to W. S. Johnston.

P. G. A. Mousseau, plumber, Hawkesbury has assigned to A. Hagar.

Stewart Nutbrown, blacksmith, Norman, has sustained loss by fire.

C. McGregor, general merchant, Mount Brydges, has assigned to A. Robinson.

Napoleon Lascombe, tinsmith, The Brook, has removed to Ville Marie, Que.

J. E. Dickinson, dealer in agricultural implements, Norman, has sustained loss by fire.

The goods of Parker & Co., general merchants, Waverley, have been sold by bailiff.

The assets of J. E. Langlois, general merchant, The Brook, are to be sold on September 8.

A meeting of the creditors of B. G. Burk, general merchant, Buxton, was advertised for August 30.

The Redpath Motor Vehicle Co., of Berlin, Limited, Berlin, have made application for winding up order.

Albert E. Grant, harnessmaker, Essex, has assigned to F. B. Geddes; meeting of creditors the 3rd prox.

The Imperial Paper Mills of Canada, Limited, Toronto and Sturgeon Falls, sustained loss by fire at Sturgeon Falls.

A meeting of the creditors of Marble-Swift Automobile Co., of Canada, (Henry Adams, proprietor), Woodstock, is to take place on the 5th prox.

### QUEBEC.

H. Boland, general merchant, Quyon, has sold out.

A. Dallaire, general merchant, Tremblay, is offering to compromise.

The assets of J. W. Donohue, general merchant, Roberval, have been sold.

George Belanger, dealer in agricultural implements, Montreal has registered.

A. Friendlich, general merchant, St. George East, is offering to compromise.

L. E. Desilets, general merchant, Shawinigan Falls, is offering 30c on the dollar.

The assets of L. A. Robitaille, hardware and furniture dealer, Quebec, have been sold.

The assets of L. H. Chouinard, general merchant, Matane, are to be sold on the 2nd prox.

Imperia Donat Robitaille has registered under the style of L. A. Robitaille & Cie., hardware dealers, Quebec.

H. Lemaire and L. E. Taschereau are joint curators for S. H. Frigon & Co., general merchants, Three Rivers.

S. E. Adam, general merchant and lumberman, Disraeli, has assigned to V. E. Paradis, provisional guardian.

S. Fortin, general merchant and tinware dealer, Hebertville, has assigned to V. E. Paradis. Meeting to appoint curator was held Sept. 1.



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**IVER JOHNSON'S ARMS & CYCLE WORKS.**  
FITCHBURG, MASS.

S. R. Switzer, F. F. Gregory and Wm. J. McClary, have registered under the style of Montreal Electrotpe & Sterotype Co., Montreal.

The Sheffield Cutlery Co., Montreal, have presented petition for liquidation, and it has been granted; Lamarche & Benoit, provincial liquidators.

### MANITOBA AND N.W.T.

G. Betts, general merchant, Yorkton, has sold out to J. E. Carpenter.

McDonald & Co., dealers in tents, etc., Winnipeg, have dissolved partnership.

P. D. Hives, general merchant, Hal-brite, has been succeeded by A. E. Sib-bald.

Chevigny & Rinquette, general merchants, Morinville, have dissolved partnership.

O. Tourigny, dealer in agricultural implements, Wolseley, has sold to J. E. Fourigny.

E. S. Miller & Shopp, general merchants, Gretna, have been succeeded by Miller & Son.

The estate of R. Ramsay, general merchant, Bear's Hill, has been sold to N. W. Gould.

Faulhafer & Simons, general merchants, Fort Saskatchewan, have dissolved partnership.

M. A. Boyd, hardware dealer, Lyleton, has been burned out; loss partially covered by insurance.

Cheney Bros., hardware dealers, Lyleton, have been burned out; loss partially covered by insurance.

Hartry Bros., general merchants, Lyleton, have been burned out; loss partially covered by insurance.

James Murray, dealer in agricultural implements, Lyleton, suffered loss by fire; covered by insurance.

Fraser & Green, general merchants, Fort Saskatchewan, have dissolved partnership; A. W. Fraser retires.

Laing, Smith & Co., general merchants, Lyleton, have been burned out; loss partially covered by insurance.

The Smith Bros. Mfg. Co., Limited, Yorkton, have been succeeded by the Western Builders' Supply Co., Limited.

### NOVA SCOTIA.

James Moffatt, general merchant, Amherst, has failed.

Urquhart & Codman, general merchants, Londonderry, have assigned.

The planing Mill of Ronald Gillis, Sydney, has been damaged by fire.

### BRITISH COLUMBIA.

J. Market dealer in tinware, Victoria, has gone out of business.

W. H. Spofard, contractor, Victoria, has gone out of business.

Jun Kee Co., general merchants, Vancouver, have dissolved partnership.

C. T. Diamond, general merchant, Camborne, is offering 50c on the dollar.

### NEWFOUNDLAND.

Horwood Lumber Co., St. John's, have sustained loss by fire; fully insured.



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212-218 COWAN AVENUE, TORONTO.

Sample Room at 21 SCOTT STREET, Telephone Main 4056.

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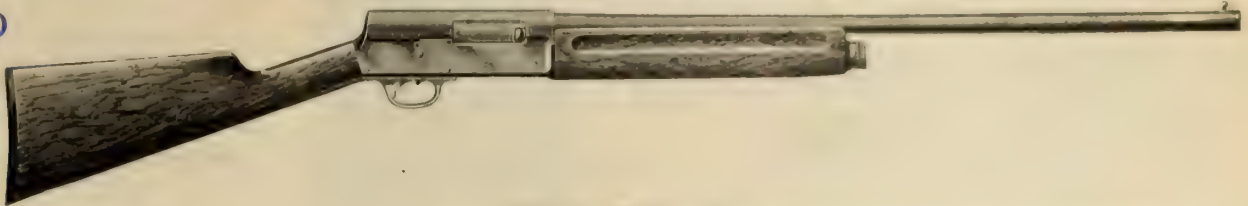
(Where orders may be left if not convenient to visit our Warehouse at Parkdale.)

Telephone:—Warehouse, Park 1585

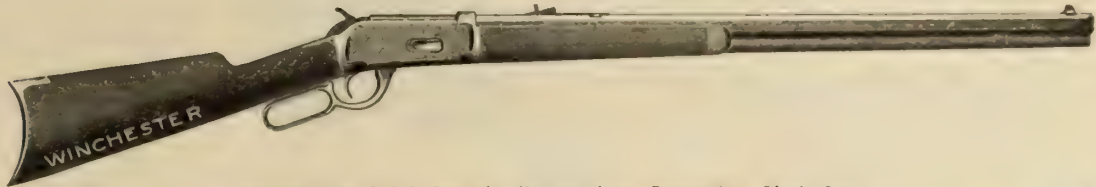
Wholesale only

Only wholesale

## Winchester Repeating Rifles



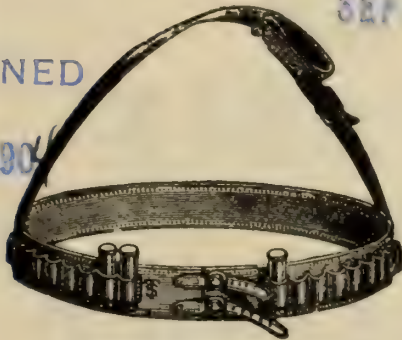
"Browning" Automatic.



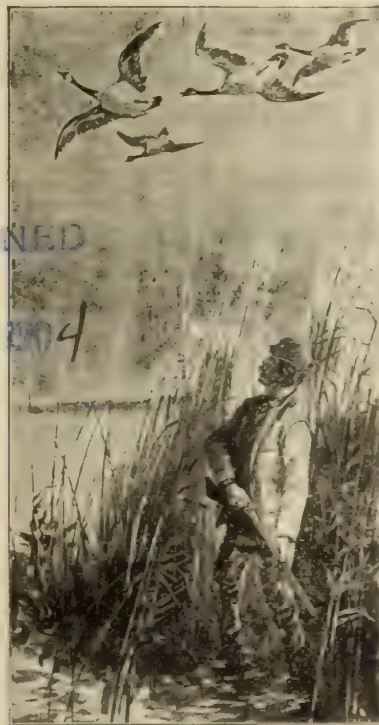
"Browning" Solid Breech, Hammerless Repeating Shot Gun.



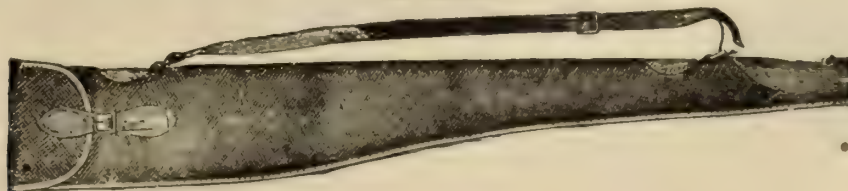
Cartridge Belt.  
To Hold 20 Cartridges.



Cartridge Belt with Strap.  
To Hold 20 Cartridges.



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For Gun, Rifle and Ammunition see our Hardware Catalogue.



"Dead Shot" Powder.  
Best Black Powder Made.



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Some day  
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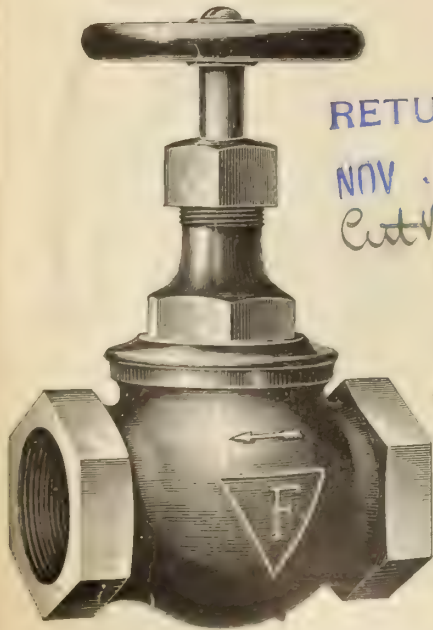
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## FAIRBANKS RENEWABLE

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# MACHINERY

## MACHINERY MARKET.

### Quebec.

Office of **HARDWARE AND METAL**,  
232 McGill Street,  
Montreal, Sept. 1, 1904.

**U**SUAL conditions at this season of the year are towards a revival in the machinery market, and although the advance has not been marked by any striking increase of trade, there is, notwithstanding a brighter tendency and a better feeling than before. A few large orders in view during the Summer, have been cleared up, but they were a little outside of ordinary trade. The volume of business has increased materially during the past week. Machine tools have been in active demand, while wood-working machinery is almost as brisk. Boiler and engine installations have also been reported, as well as foundry apparatus. Electrical machinery is moving well, and several large orders are under way. Enquiries are more numerous and indications go to prove that an active Fall trade has commenced.

### Ontario.

Office of **HARDWARE AND METAL**,  
10 Front Street East,  
Toronto, Sept. 2, 1904.

**O**N the local market dealers look for a busy time during the last exhibition week. One local dealer says that that week is usually the most active week of the fifty-two. During that time usually very many inquiries materialize into orders, owing to so many customers being in the city.

During the last week the demand for machine tools has been good, and not a few orders have been closed in that line.

Engines and boilers still hold a prominent position on the market, and wood-working machinery, especially planing mill outfits is active.

### Electrical Engineers' Visit.

September 7 and 8 will see a large delegation of some of the most prominent electrical engineers from the United States, Great Britain, and Europe, on a visit to Montreal and vicinity. The party includes about thirty Americans, seventy-five from Great Britain and Ireland, forty-two from Italy, while France, Germany, and other Continental

countries are sending a contingent. Professor Owens, of McGill University, Montreal, is chairman of the reception committee, and under his direction an elaborate programme has been prepared for the pleasure of the visitors. An official welcome is to be extended by the city. The engineers are to be shown the different power plants, and given a chance of studying the conditions in Canada. The programme will include a trip to the Lachine Hydraulic Works, and the Montreal Street Railway plant; a run down the Lachine Rapids, a visit to Shawinigan; a drive through the city, and a garden party at Dorval.

### Machinery and Electrical Notes.

**T**HE firm of Burrige & Cooper, commission agents and general machinery dealers, Winnipeg, finding it necessary to increase their stock in all lines, have decided to form a joint stock company with a capital of \$50,000. The new firm will have a repair machine shop installed.

A new dynamo of 1,200 incandescent light power will be installed in the power house at Clinton.

H. W. Petrie, Toronto, is shipping a pair of horizontal boilers to W. R. Sterling, Ridgeway, Ont.

The Village of Madoc, Ont., are considering the borrowing of \$9,000 to install an electric lighting plant.

A. Rubbra, of the Machinery Exchange, Montreal, has secured the agency for Clarke & DeMill, of Galt, manufacturers of wood-working machinery.

The Walker Steel Range Co., Windsor, Ont., have just purchased a gap lathe, manufactured by the London Machine Tool Co., London, from H. W. Petrie, Toronto.

The Toronto & Niagara Power Co., Niagara Falls, Ont., are calling for tenders for the erection of a large fire-proof sub-station building, the tenders to be in before September 12.

The Packard Electric Co., St. Catharines, are installing a new patent head engine lathe manufactured by the Lodge & Shipley Machine Tool Co., Cincinnati, O., and sold by H. W. Petrie, Toronto.

The Shawinigan Falls Water & Power Co. have given a contract for a two-phase rotating field alternator of 6,600 k. w. capacity, and 2,200 k. w. transformer, which was secured by the West-

inghouse Electrical & Mfg. Co. The price is reported to be nearly \$200,000.

The Lunenburg Gas Co., of Nova Scotia, are increasing the head of their water tower from 16 to 25 feet. They also intend installing a new power plant.

The Hull & Ottawa Power Co. is installing a new set of water wheels, a 2,000 h. p. generator, and a new switch-board. The company will furnish electric power to the new works of the International Portland Cement Co., at Hull, Quebec, which will utilize 3,600 electric h. p.

The General Electric Co., of Schenectady, N. Y., has closed down its mica works at Perth and Smith's Falls, and reduced the staff in its large mica factory on Catharine street, Ottawa. The reason given for the move is overstocking at the headquarters. Employment was given in the Smith's Falls branch to about sixty-five hands, and in the Perth factory to about fifty hands. In the busy season in the Ottawa factory about 200 girls were employed as against forty now at work.

Among the orders placed with H. W. Petrie, Toronto, are: A Bremner combined punch and shears for the Oil Well Supply Co., Petrolia, a large chocolate manufacturing plant for A. J. Stewart, Limited, Duncan street, Toronto; a 150 h. p. high pressure boiler for the Manitoba Wind Mill & Pump Co., Brandon; a 6-inch pipe machine for Thorn & Co., Toronto; a Jewell automatic engine and Erie boiler for Dominion Brass Co., Port Colborne.

A successful test has been made at Schenectady by the General Electric Co. of a system of trolley propulsion which is expected to revolutionize present methods. It is what is known as a single-phase alternating compensated motor system, which allows of using a direct current of 600 volts, or an alternating current of 2,000 volts. By the use of this system the alternating current could be used between cities and the direct in the cities, where a high voltage is dangerous. It would also result in a great saving in equipment and the necessity of transformer stations and power houses. The alternating current motor, with its inherent advantages of high voltage distribution, is adopted to replace the steam locomotive on either high speed passenger or heavy freight work.



## A MULTI-CURRENT FEED-WATER HEATER.

A GREAT economy in the life of boilers results from heating the feed-water before it reaches the hot surfaces, and moreover, the use of a properly designed heater will considerably increase the efficiency of the plant. In order to obtain this possible saving (often as much as 15 per cent.) the heaters must be designed according

mediums should be kept in motion at a certain speed. In heaters having wide spaces in which one or the other of the mediums remains quiet, the highest efficiency is not obtained.

The number of British thermal units passing through a square foot of thin copper per hour, with a difference on one degree Fahrenheit between the

low-pressure steam apparatus like condensers, feed-water heaters and vacuum evaporators, the figures are 360 units when the steam and water move at right speeds and 120 units when the steam and water are quiet. In apparatus heated by hot water, such as sterilizers, 200 B.T.U. are transmitted per hour when the water is moved in the correct manner and 40 to 60 B.T.U. when the water remains quiet.

These figures show that, when a heater is designed with little or no regard to the right direction of flow of the heating and heated mediums, it must be considerably larger and therefore both heavier and more expensive than apparatus of the same output which is properly designed and constructed. This is of concern in stationary as well as marine service, since it determines the cost and weight of auxiliaries. Therefore it is important in the selection of a heater that the heat-transferring efficiency be considered, and the statement that quality of heating surface determines the capacity of a heater, is erroneous. The steam should traverse each section at high speed and the streams should be frequently intermingled before leaving the heater. The feed water should do the same. Efficiency tests will show that there is a great difference depending upon whether the water moves slowly or quickly.

In the feed-water heater, illustrated herewith, small tubes and five changes of direction of flow of the water have been adapted in order to obtain the high velocity, and a small water core adapted to the best absorption of heat from the steam. The exhaust steam also flows through the length of the heater three times, the area of the passage being gradually reduced to allow for condensation. The steam enters through the upper opening and passes down through a passage of one-half the cross-sectional area of the whole heater; that is, there is a diametrical baffle plate extending from the top nearly to the bottom. At the bottom, the steam turns upwards, traversing two segmental passages at either side, each having one-sixth of the total cross-sectional area; that is there are two radial baffle plates back of the large diametrical baffle plate. Arriving again at the top of the heater the steam remaining uncondensed passes downward through a passage having one-sixth of the cross-sectional area of the heater and at the bottom the remaining steam and air escape through the discharge opening to the condenser



Knowles Feed Water Heater.

to correct principles. It is essential not only that the direction of flow of the water in a heater should change, but the direction of the steam as well, if the best results are to be accomplished and stagnant conditions avoided. It is also necessary that the heating and heated

warmer and colder mediums, is in the case of a high-pressure steam feed-water heater or evaporator, 400 units when the steam and water move at the appropriate speed, but only 200 to 240 units when the steam and water remain quiet during the heating process. In

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## CONDENSED MACHINERY ADVERTISEMENTS.

## YEARLY CONTRACT RATES.

|                           |          |         |
|---------------------------|----------|---------|
| 100 words each insertion, | 1 year   | \$30 00 |
| "                         | 6 months | 17 00   |
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## MACHINERY WANTED.

Notices under this heading inserted free for subscribers to **HARDWARE AND METAL**.

**C**IRCULAR shears and double seaming machine, in good order. Moore Bros., Bradford, Ont. (29)

**S**CALES—Heavy; double iron column dormant scales; double beam; for grain warehouse. Box 36, Hensall, Ont.

## SITUATIONS VACANT.

**M**ACHINIST WANTED—Who understands sewing machines. Apply Rhys D. Fairbairn, Limited, 8-10 Wellington east, Toronto.

**M**ACHINIST WANTED—A good machinist for general repair work; steady job. W. G. Paton, Wingham, Ont.

## SITUATIONS WANTED.

**B**y mechanical draughtsman (mechanical engineering student) position for the winter in draughting office or some engineering works. Apply to Joseph Presner, 282 Selkirk avenue, Winnipeg.

## MACHINERY FOR SALE.

Rates for first insertion 2c a word, and for subsequent insertions 1c a word.

**F**OR heavy, machine dressed, smooth running iron or steel gearing, write the Wm. Kennedy & Sons Limited, Owen Sound.

**A**LTERNATING motors and electrical machinery, all sizes, for power and light. Jones Moore Electric Co., Limited, Toronto.

**B**OILERS—New steel boilers, 72 x 14, 66 x 14, 60 x 12; also 50 h.p. high pressure locomotive boiler for saw mill purposes. The Robt. Bell E. & T. Co., Limited, Seaforth, Ont.

**C**ANADA STEAM PUMP CO., Richmond st. east, Toronto; standard sizes in stock; write for prices.

**D**YNAMOS, MOTORS—Manufactured by McLachlan-Joy Electric Co., Limited, 201 Queen east, Toronto.

**E**NGINES—Gas, gasoline, stationary and marine. E. Housey, manufacturer, 815 Queen west, Toronto.

**E**STIMATES given on forced and induced draft fans for steam plants. Shelton & Sheldon Galt.

**F**OR steel castings of reliable quality and true to pattern write The Wm. Kennedy & Sons, Limited, Owen Sound.

**G**AS and gasoline engines—stationary, marine, automobile, also launches, silver medal, highest award Dominion Exhibition, Toronto; write for catalogue. The Gasoline Engine Company of Toronto Junction, Limited.

**M**ACHINE tools for prompt delivery—planers, shapers, lathes, drills, bolt cutters, milling machines, punches and shears; also full line of machinists supplies; good second-hand machinery taken in exchange; show room open 7 a.m. to 11 p.m. H. W. Petrie, Toronto.

**G**AS AND GASOLINE ENGINES.—Fairbanks, 1 to 100 h.p.; stationary, portable and marine; fully guaranteed; reliable and economical. Write for catalogue and prices. The Fairbanks Company, Toronto.

**M**ACHINE TOOLS for prompt delivery—Planers, shapers, lathes, drills, bolt cutters, milling machines, punches and shears; also, full line of machinists supplies. Good second-hand machinery taken in exchange. Show room open 7 a.m. to 11 p.m. H. W. Petrie, Toronto.

**O**NE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6-in. bed. Address Box 748, Montreal.

**O**NE second-hand shafting lathe, 26-in. swing, 20-ft. bed. Address Box 748, Montreal.

**P**UMPS—Standard duplex pumps in stock. The Smart-Turner Machine Co., Limited, Hamilton.

**T**HE STUART MACHINERY CO. LTD., 764 766 Main street, Winnipeg, sole agents in the West for MacGregor Goudlay wood working and iron working machinery, than which there is none better. Also for Beardmore's leather belting, Dodge wood pulleys and self-oiling hangers, Soule steam feeds for sawmills, E. Leonard & Son's engines and boilers, Stratford flour mill machinery etc., etc., etc.

## BUSINESS CHANCES.

**A** FIRST-CLASS Sawmill for sale cheap, in good condition, in good locality. Apply to Mrs. N. Fulton, Box 59, Fingal, Ont.

**C**IDER MACHINERY—Hydraulic press; revolving table, pumps; jelly machinery, 20 in. vertical and 48-in. Burr chopping stones; all complete. Box 36, Hensall, Ont.

**F**ACTORY ROOM TO RENT—Town of Dundas, cheap to right people; electric power, steam heat. Apply or write, J. A. Kammerer, 80 King street east, Toronto.

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TORONTO, CANADA.



or atmosphere, as the case may be. The water traverses six radial nests of tubes, each forming a segmental group. The cold water entering the heater passes up through the tubes occupying the last steam compartment. Arriving at the top it passes down through the next segmental group and so on upward and downward until it reaches the outlet. This gives the rapid circulation and thorough mixing of the feed-water required to obtain the maximum heating effect possible in an apparatus of this character.

The tubes are easily accessible for cleaning and special care has been taken to provide for expansion and contraction, thus making it possible to use copper or brass tubes as occasion requires. The ends of the tubes are firmly expanded and secured in the two heads, one of which is rigid and part of the mail shell casting. The other head is bolted to a copper plate or diaphragm, the periphery of which is attached to the flange of the heater shell. This arrangement takes care of the unequal expansion between the tubes and the shell, and is free from strain under all conditions of temperature and pressure. The flow of water through the tubes is controlled by partitions in the water chambers at each end of the heater, so that the water will pass through each nest in turn. The circulation is positive and the heater is designed to give an even distribution of water, avoiding a sluggish flow or positive stagnation, which often appears in ordinary tubular heaters.

The total absence of stuffing boxes and packings of any kind in this heater does away entirely with the possibility of leakage and loss of feed-water. The trouble experienced with tube packings subjected to high temperature and pressures has been a source of continual annoyance and dissatisfaction. The cross-sectional area between the tubes is greater than the area of the exhaust pipe, offering no obstruction to the flow of the steam and thus eliminating back pressure. Entrained water is removed by drip pipes. Access to the heater is had by removing the heads; the tubes of the vertical heaters can be cleaned from the top and the horizontal heaters from either end. Feet or saddles are furnished as occasion requires. Mud-blows are provided to keep the heater clean and free from sediment. The heater is tested under 250 lbs. pressure per square inch, giving a safe working pressure of 175 lbs.

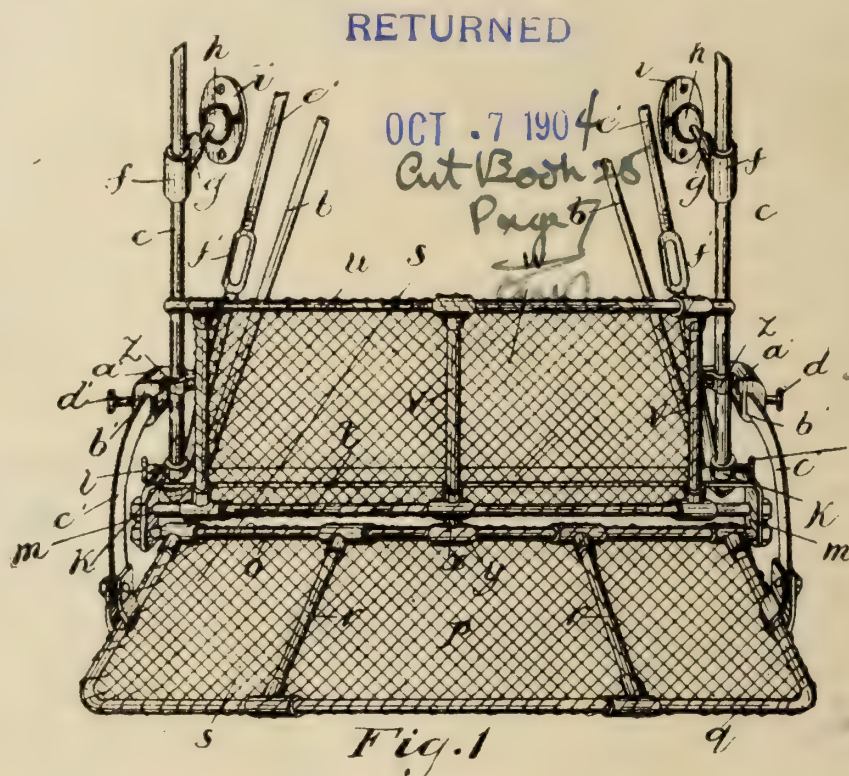
On the basis of the ordinary commercial rating of one horse power capacity per every 30 lbs. feed-water heated tests of this heater shows that one containing 24.05 square feet of tube surface is capable of handling 228 horsepower. This would reduce to 9.5 horsepower per square foot of tube surface is capable of handling 228 horsepower than the commercial rating of three horse power per square foot.

The type of heater described is manufactured by the Blake-Knowles Steam Pump Works, 114-118 Liberty street, New York city, who built it in sizes up to 5,000 horse power in both the horizontal and vertical types.

in its adjusted position irrespective of the motion or speed of the car. The car fender is supplied with two fender-supporting arms rigidly connected to the truck on each side. On each side of the fender are two upright arms, as can be seen in the figure, and held to the front of the car so that with the pitching of the car the rods may move up and down in the supports as shown.

#### Gas Engines for Electric Power.

WHEN gas engines were first largely introduced their use for running dynamos was hardly to be considered. However, with refinements in speed regulation they have been used



#### New Car Fender.

IN view of the many discussions as to the efficiency or non-efficiency of the street car fenders in use on the cars of the Toronto Street Railway and other urban street railways, the accompanying cut of a fender invented and patented by Mr. A. E. McLean, of the Toronto machinery firm of Levy, Weston & McLean, should prove of interest.

The object of this invention is to provide a perfectly rigid fender in spite of the pitching of the car especially noticed in the single truck cars. This is provided for by attaching the fender to the truck or truck-frame instead of to the car in such a manner that it can be adjusted to the road-bed and carried

and this use promises a very wide application in the running of electrical machinery, since they have been found to be highly satisfactory for that purpose. As speed regulation is one of the most important factors in connection with electrical generation the attention given towards producing that end not only by heavy fly wheels but by special governors has been considerable.

The Walrath engine, illustrated here is of the vertical type with the throttling governor made in one, two and three cylinders, being well adapted to all power purposes and is especially designed for electric lighting or other purposes requiring close regulation of speed.



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Stitched Cotton Duck Belting



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Ask for "Maple Leaf" and take no other.

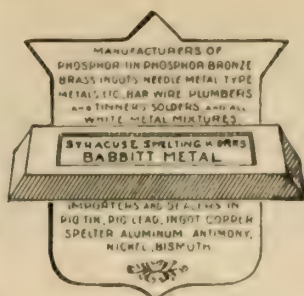
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HAMILTON, ONTARIO. Limited

Use our "MAPLE LEAF" Belt Dressing.



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12, 16 and 20 Gauge.  
Steel and Twist Barrels  
Superior in Design, Workmanship  
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Simplest  
"Take Down"  
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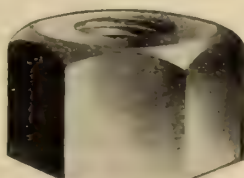
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ALL GRADES OF WORK.

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SPECIAL  
HERCULES  
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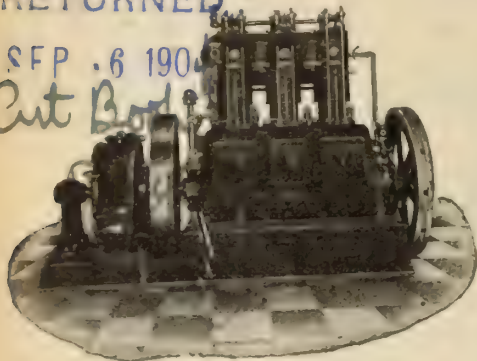


It may be noted from the cut that this engine is direct connected to the generator by a solid shaft extending through the engine and armature of the generator thus making a very neat and compact plant, reducing the floor space to a minimum and doing away with the belt entirely and increasing the efficiency of the plant thereby about 10 per cent., which is usually lost in belt transmission.

Many of these engines have been installed in both private and municipal lighting plants, including office buildings, hotels, etc., and three of the largest daily printing presses in the city of Pittsburg, are being run by engines of the above type.

This engine is not only of good mechanical design but is extremely simple in construction, having less working parts than any other high grade engine.

RETURNED

SEP. 6 1904  
Cut Body

3-cylinder 75 h.p. direct connected Gas Engine and Generator.

all of which are fully guaranteed, made interchangeable and of easy access.

It is also very economical in the consumption of lubricating oil as well as being very cleanly on account of the method of lubrication, the oil being confined to the inner parts of the crank case where the crank shaft dips therein constantly splashing and thoroughly lubricating all of the working parts and does not in any way throw oil about the engine or engine room.

#### Seen Outside the Machinery Hall.

H. W. Petrie, Toronto, while not having a space in the machinery hall at the Dominion Exposition is nevertheless letting the visitors to the city see and hear of the machinery he handles. At the immense circular warehouse and show-room on Front street near the Union Station, through which there is a public walk from the station yards

to Front street, there is an exhibit of machinery that is certainly worth seeing to any one interested. During the Exhibition weeks there are running there three gasoline engines, one driving a slotting machine, one a Buffalo blower and one direct connected to a pump. Those in charge of the warehouse are always ready to explain anything to visitors.

#### The Driving Power of Belts.

TO calculate the driving power of belts, divide the speed in feet per minute by 1,100; the quotient will be the horse power per inch of the belt's width that is allowed in good practice to be transmitted by single thickness leather belting having laced joints. Although this is the best practice, the amount is often exceeded by as much as 25 per cent. with satisfactory results though the life of the belt is shortened.

Double thickness belts will transmit twice and triple thickness belts three times as much power as single thickness belts.

Spliced belts will transmit a third more power than those that are laced.

The adhesion of belts to pulleys, and the consequent driving power, vary so much under different conditions of use that some intelligent deviation is occasionally necessary from any simple rule. From the horse power given by the above rule, therefore, some deduction should be made when the belt is vertical or inclined instead of horizontal; when the arc of contact on the pulley is much less than 180 degrees or a "half wrap"; when the speed of the belt is less than 900 feet per minute, and also when one or both of the pulleys are small in diameter.

Five per cent. should be deducted for every ten degrees less than a "half wrap."

Twenty-five per cent. should be deducted for vertical belts when used without a tightening pulley.

In the case of small pulleys deduct from 0 to 60 per cent. for single belts on pulleys from 12 in. to 2 in. diameter, double belts on pulleys from 24 in. to 6 in. diameter, and tripple belts on pulleys from 36 in. to 15 in. diameter.

When circumstances permit, the best speed for belts is about 5,000 feet per minute. The adhesion is then so good as to require less stretching of the belt with less consequent loss of power by friction.

The smoother the surface of the pulleys and of the belt surface in contact

with them, the better is the adhesion and the greater driving power. It is, therefore, sometimes found of benefit in the case of low belt speeds or of pulleys of small diameter to cover the pulleys with leather or to make them of wood, polished, and to run the hair side of the belts in contact with the pulley faces.

The ratepayers of Sherbrooke, Que., recently voted against municipal ownership regarding the control of electric light and power supply of the city. It was proposed to issue bonds to the amount of \$200,000 for the purpose of purchasing the plant of the Sherbrooke Light, Heat & Power Co., or to install a new electric plant.

#### TO PROMOTE TRADE.

CANADIANS to the number of about 50, resident in the Republic of Mexico, have formed an organization known as the Canadian Commercial Club, with the object of promoting trade between Canada and Mexico.

The club is desirous of informing manufacturers and other interested in the field that any inquiries addressed to the secretary, A. W. Donly, Apartado 2029, Mexico City, will receive prompt, correct, and unbiased answers. It would also be glad to receive catalogues and other information as to the lines of goods in which each is interested, that it may, in return, give to those at home the benefit of their experience and knowledge of the country's requirements.

The club is ready to put importers of commodities which Mexico has to export in direct communication with the Mexican exporter.

It is proposed to erect a new cathedral in Sherbrooke, Que.

#### NIAGARA FALLS POWER CO.'S REPORT.

In view of the operations of the three large Canadian power companies at Niagara Falls, Ont., the following report of the Niagara Falls Power Co., Niagara Falls, N. Y., will be of interest. The reports of the earnings of the company for the year ending June 30, 1904, are: Gross earnings, \$1,126,423; expenses, \$214,530; net earnings, \$911,893; other income, \$114,936; total net income, \$1,026,829; total fixed charges, \$729,560; balance, \$234,869; improvements and betterments, \$74,331; surplus, \$159,038; previous adjusted surplus, \$223,223; total surplus, \$383,161.



# **“EMPIRE”**

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## **Smokeless Sporting Powder**

This European favorite, made by the Nobels', has, though but recently introduced here, taken a commanding position through its high velocity, low pressure and uniformity. “Empire” does not need a special cap.

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at the same price as the best  
American brands.*

**HAMILTON POWDER CO., Agents**



# FINANCE AND INSURANCE

## CHARTERED BANK STATEMENT.

**T**HE statement furnished by the thirty-four chartered banks for the month of July shows evidence of steady but continuous expansion, even when compared with the most expansive of Canada's recent prosperous periods. As compared with June, the note circulation of the banks shows slight contraction—a natural development during July. As compared with July last year, the note circulation has expanded more than two million dollars, and the expansion is about eleven million when compared with July, 1901.

The deposits of the public with Canadian chartered banks also continue to increase in the most encouraging way. The total deposits amounted to \$431,045,762 for July, as compared with \$423,874,030 for June, and \$382,140,101 for July, 1903. Deposits after notice continue to show the greatest relative expansion, but the expansion in deposits on demand has been quite appreciable, being nearly two and a half million dollars as compared with June.

Deposits of the public on withdrawal after notice have more than doubled since July, 1896. They were then \$122,100,074, whereas for July, 1904, they were \$312,713,823. When the July deposits withdrawable after notice are compared with those of June, an expansion of nearly five million dollars is shown.

Current loans and discounts amounted to \$208,759,940 for July, 1896, and to \$414,096,802 last month, a gain of \$205,336,862, or nearly a hundred per cent. There is a slight gain in discounts comparing July with June, and a gain exceeding fifty millions as compared with July a year ago. It is also significant to note that call loans which went up to \$45,876,667 in July, 1902, are now down to \$34,924,405.

Foreign business has contracted appreciably since last year, which goes to show that the Canadian banks have now pretty nearly enough Canadian business to keep them busy. The total assets of the banks now amount to \$696,409,519, or \$140,000,000 more than the liabilities, as compared with \$641,985,699 a year ago and \$319,582,621 for July, 1896. At that time, July, 1896, there were thirty-eight chartered banks, so that the average assets amounted to \$8,410,000, whereas now there are only thirty-four chartered banks, and the average assets amount to \$20,482,632.

## AUSTRALIAN OPPORTUNITIES.

**I**N his latest report on trade conditions in Australia, D. H. Ross, Canadian Commercial Agent at Melbourne, remarks that up to the present no Canadian or United States banks have opened branch banks in Australia or New Zealand. There appears to be a splendid opening for an extension of the Canadian banking system to Australia, which would be appreciated by all Canadian houses doing business there, as well as by exporters to Australia. At present all exchanges are made through London, which is inconvenient, expensive and pregnant with delay. Gold can be shipped from Australia to Vancouver or San Francisco at less rates than to London. The United States Government exchanges gold

at par between its sub-treasury in San Francisco and the treasury at Washington or other sub-treasuries in the different United States cities. This would enable a Canadian bank, having offices in Australia, San Francisco and New York, to secure the greater portion of the profitable exchanges on Canadian and United States business which is now all settled through London. In this connection, it may be of interest to bankers to note the Australian shipments of gold to San Francisco in recent years, the values of which are as follows:—

|            |            |
|------------|------------|
| 1900 ..... | £3,710,156 |
| 1901 ..... | 2,150,363  |
| 1902 ..... | 1,601,000  |
| 1903 ..... | 1,500,000  |

## INSURANCE IN MONTREAL.

**O**WING to unsatisfactory conditions prevailing at the Montreal Water Works, the Executive of the Canadian Fire Underwriters' Association decided on Aug. 11 to charge in the congested districts of Montreal 50 cents more than the existing tariff on fire insurance. Since then the underwriters have taken the ground that the congested city districts were getting insurance too cheaply, from which the inference may be drawn that the old level is not to be restored even after the requisite repairs to the water works shall have been completed. Considerable dissatisfaction has been expressed by the mercantile interests of Montreal over this alleged unjustifiable action of the fire underwriters, and some drastic measures may be taken as a result.

## FINANCE NOTES.

A. Guilbault & Cie., bankers, Montreal, have registered.

The Imperial Securities Co., Toronto, has obtained a charter.

Mr. J. M. Robinson, banker and investment broker, St. John, N.B., has been succeeded by J. M. Robinson & Sons.

The thirtieth annual convention of the American Bankers' Association will be held in New York on September 14, 15 and 16.

The shareholders of the Consumers' Gas Co., Toronto, have passed a resolution authorizing an increase in capital of \$1,500,000.

The National Agency Co., of Toronto, have taken over the assets and affairs of the Century Life Assurance Co., of Vancouver, B.C.

Harsthorne, Bogert & Battelle, bankers and brokers, Montreal, have registered.

The British America Trust Co., Grand Forks, B.C., has increased its capital stock to \$100,000.

Mr. S. B. Fuller, of Woodstock, Ont., formerly manager of the Imperial Bank, has been appointed manager of the branch of the Crown Bank, to be opened in Woodstock about September 1. The Crown Bank has also opened branches at Comber, Ont., Bracebridge, Ont., and Aylmer East, P.Q.

According to a recent ruling of the British Treasury Department the exemption from income tax on premiums paid in the United Kingdom on life insurance or on contracts for deferred annuities, which has heretofore applied only to premiums paid to companies holding charters under the laws of Great Britain, will in the future apply to any or all insurance companies legally established in any British possession. This matter is of great significance to the large colonial offices doing business in Great Britain.



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Incorporated 1851

**FIRE  
AND  
MARINE**

Head Office  
**Toronto, Ont.**  
 Capital - \$2,000,000.00  
 Assets, over - 3,546,000.00  
 Annual Income - 3,678,000.00

HON. GEO. A. COX, President.

J. J. KENNY, Vice-President and Man. Director.

C. C. FOSTER, Secretary.

## Money

CAN BE SAVED BY MEANS  
OF AN ENDOWMENT POLICY.

**YOU CAN ONLY SECURE  
SUCH A POLICY WHILE YOU  
ARE IN GOOD HEALTH.**

Pamphlets and Full Particulars regarding the  
New Accumulation Endowment Policy  
sent on application.

## Confederation Life ASSOCIATION.

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## BRITISH AMERICA ASSURANCE COMP'Y

FIRE AND MARINE.

Incorporated 1833

CASH CAPITAL, \$1,000,000.00.  
 TOTAL ASSETS, \$2,024,096.02  
 LOSSES PAID SINCE ORGANIZATION, \$23,886,005.32

HEAD OFFICE, - BRITISH AMERICA BUILDING,  
Cor. Front and Scott Sts., Toronto.

HON. GEO. A. COX, President. J. J. KENNY, Vice-President  
P. H. SIMS, Secretary. and Managing Director

## THE CANADIAN BANK OF COMMERCE.

Paid-up Capital, - \$8,700,000  
 Rest, - \$3,000,000

HON. GEO. A. COX, President. B. E. WALKER, General Manager.

HEAD OFFICE: TORONTO, CANADA.

This Bank, with 110 branches, covering all the principal cities of Canada and the Pacific coast of the United States, and its own offices in London, Eng., and New York, is able to offer to those engaged in mercantile business of any kind unexcelled facilities for any legitimate banking business.

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| Athin     | Greenwood | Nanaimo         | Vancouver  |
| Cranbrook | Kamloops  | Nelson          | " East End |
| Fernie    | Ladysmith | New Westminster | Victoria   |

### MANITOBA AND NORTHWEST TERRITORIES:

|              |                |                    |             |
|--------------|----------------|--------------------|-------------|
| Calgary      | Elgin          | Moose Jaw          | Regina      |
| Carman       | Elkhorn        | Neepawa            | Swan River  |
| Dauphin      | Gilbert Plains | Ponoka             | Treherne    |
| Dawson       | Grandview      | Portage la Prairie | White Horse |
| Edmonton     | Innisfail      | Red Deer           | Winnipeg    |
| Lloydminster | Medicine Hat   |                    | " North     |

### ONTARIO AND QUEBEC:

|             |              |                 |                    |
|-------------|--------------|-----------------|--------------------|
| Ayr         | Dundas       | Ottawa          | Stratford          |
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| Belleville  | Fort Frances | Parkhill        | Toronto, 8 offices |
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| Blenheim    | Goderich     | Port Perry      | Walkerton          |
| Brantford   | Guelph       | St. Catharines  | Walkerville        |
| Cayuga      | Hamilton     | Simcoe          | Waterloo           |
| Chatham     | London       | Sault Ste Marie | Warton             |
| Collingwood | Montreal     | Seaforth        | Windsor            |
| Dresden     | Orangeville  | Simcoe          | Woodstock          |

### MARITIME PROVINCES:

|             |            |             |            |
|-------------|------------|-------------|------------|
| Amherst     | Canning    | New Glasgow | Springhill |
| Antigonish  | Halifax    | Parrsboro   | Sydney     |
| Barrington  | Lockport   | Sackville   | Truro      |
| Bridgewater | Laurelbark | St. John    | Windsor    |
|             | Middleton  | Shelburne   |            |

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|                |                 |                |
|----------------|-----------------|----------------|
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A general banking business transacted. Foreign exchange bought and sold

CAPITAL PAID UP, - \$1,000,000.  
 RESERVE FUND, - 1,000,000.

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# ELECTRICAL GOODS AND SUPPLIES

## INTEGRATING WATTMETRES.

IN any central station plant it is well known that the revenue is dependent upon the system by which the power is sold, as well as upon the efficiency and excellence of the generating station. For several years all the attention of engineers and managers was devoted to the improve-

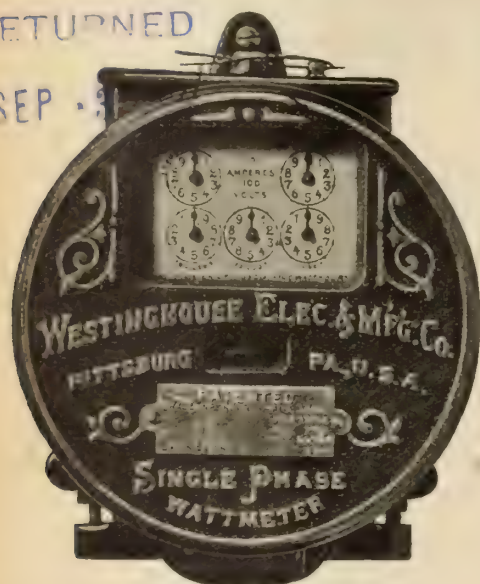
there are few central station managers, or engineers, who refuse to acknowledge the advantage of the metre system in the selling of alternating currents over any other system.

A good metre should be accurate on all loads within the range of its capacity, from very small starting loads to over-loads of fifty per cent., this accuracy to be independent of the character of the load, whether non-inductive, such as incandescent lamps, or inductive load of any power factor, such as arc

It should retain its original accuracy for a long period; that is to say, all the features of construction should be such that the metre is permanent in its calibration. It should also be as simple in design as possible to obtain correct registration under all conditions, and yet so firmly constructed that ordinary handling or usage would not in any way injure the metre. It should be easily checked and read, the dial of large size indicating directly in watt hours without a multiplier.

### READING A WATTMETRE.

To many the reading of a watt metre is a perplexing matter, but a few moments thoughtful attention to the matter will enable anyone to read the dials correctly. By paying attention to the following directions no trouble should be experienced by anyone. Three dials are illustrated, and it may be noted in starting that the reading of the dial of No. 2 is ten times as high as the reading of No. 1, and No. 3 looks similar to No. 2, but reads in kilowatt hours. The dial has five circles, and each circle is divided into ten divisions, and looking at Nos. 2 and 3, it is seen that each division, on a given circle, indicates the total watt hours and kilowatt hours marked above or below that circle. Thus, in No. 2 the first circle

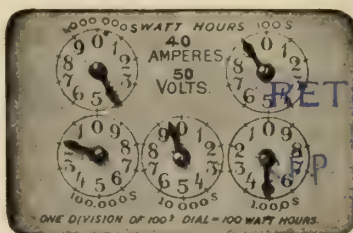


Two-wire Single-phase Integrating Wattmetr.e

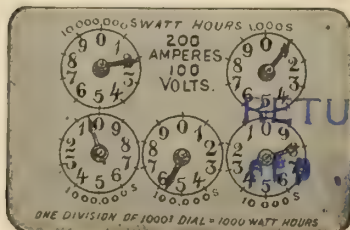
ment of plant conditions, and the trial and investigation of the apparatus presented, but in time it became evident that the flat rate system of selling electric lighting current was lacking in many respects. Either the central station loses a large portion of its proper revenue, or the customers are liable to be overcharged and become dissatisfied. Either of the above conditions is detrimental to the station's financial success. The metre system, beginning with the old chemical metre, was introduced over fifteen years ago, and met with a large measure of success, with direct current plants, until the introduction of the motor metre of the commutator type.

As the alternating current came more generally into use, a demand arose for a metre without commutator, brushes, or wound armature, of the induction type, and induction ampere hour metres were put upon the market. Since that time there has been a continuous development in ampere hour and watt hour metres, until the present time

lamps and induction motors (lagging current) or over excited synchronous motors (leading current). The accuracy should not be affected by variations in the normal frequency, quite large variations in voltage, or by ordinary changes in temperature, and atmospheric conditions. The internal losses in the metre should be small. that is, the constant loss in the shunt should not exceed two watts, and the drop in voltage through the series coils at full load should be inappreciable in metres of any capacity.



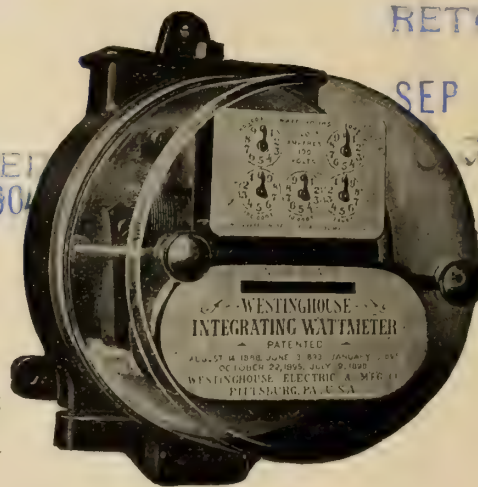
Reading—4,194,900 Watt-hours.



Reading—20,581,000 Watt-hours.



Reading—26,583,000 Kilowatt hours.



With Glass Cover.

beginning at the upper right hand corner, is marked 1,000, therefore each division of the dial means that 1,000 watt hours are registered. For example, if the pointer is at five, it means that 5,000 watt hours of energy are consumed. The second circle denotes 10,000 watt



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hours for each division, or 100,000 in making a complete revolution. The third circle in the centre of the dial shows 100,000 watt hours for each division on the dial, the fourth circle 1,000,000 watt hours, and the last circle 10,000,000 watt hours for each division, and all of them indicate ten times that much for one complete revolution. It is evident that each circle, counting from the first to the fifth, indicates just ten times as many watt hours as the preceding circle. The hands on the first, third, and fifth circle, run clockwise; while on the second and fourth circles they turn counter-clockwise, or just the reverse, and this point should always be borne in mind in reading a dial, else confusion may rise as to the correct numbers.

In reading it must be borne in mind that when a hand stands between two numbers on any circle, the lesser is the indication, providing the hand is not misplaced, and if the hand is misplaced it can be determined by referring to the preceding circle, as to whether the number before or after that hand is a correct one. For instance, if the hand on the fourth dial stands just past 6, while the hand on the third circle is at 8 or 9, or is not quite to zero, it is plain that the former hand is misplaced, and its reading is 500,000, for it cannot correctly pass a division until the preceding hand has reached and passed zero. Likewise, if we find the hand on the third circle near 4, but on the side towards 3, we would know that the hand on the third circle was misplaced and should be just half, or slightly past 4, and the reading would be 400,000. Referring to No. 1, the hand on the first dial indicates 900 watt hours, the hand on the second dial, just below rests near figure 5, but since the hand on first dial has completed only nine-tenths of a revolution, the hand on the second dial has not completed the division and should be read at 4. Again, on the third dial, the reading is 9, as the hand of the second dial has not completed one revolution. The hand of the fourth dial seems to be on 2, but correctly read in-

dicates 1, as the hand on third dial has not completed a revolution. The fifth dial indicates, in the same way, a reading of 4. Now, putting the reading of the dials together, beginning at the first dial on the right, we get a total of 4,194,000; similarly in figure 2 we get a reading of 20,581,000 watt hours, and with number three 26,583,000 kilowatt hours.

The illustrations represent Westinghouse integrating watt metres, which are handled by the R. E. T. Pringle Co.

## Notes.

The International Brotherhood of Electrical Workers, Hamilton, held their annual picnic recently.

The contract for the electrical work on the new C. P. R. hotel and depot in Winnipeg has been let to Philip Lahee, Montreal.

## THE WESTINGHOUSE INDUSTRIES.

Since the founding of the first Westinghouse industry some forty years ago, there has been added to it from year to year other kindred industries, until today the name of Westinghouse stands

for a very chain of industries. A very neat and attractive booklet is being got out describing these industries as they appear at the St. Louis Exposition. The whole lot are housed in one vast enclosure with "Westinghouse" above the entrance. Not only is a description of the exhibit of each industry given, but also a short history of its development. The booklet is profusely illustrated. The industries included are: The Westinghouse Electric and Mfg. Co., the Sawyer-Man Electric Co., the Westinghouse Air Brake Co., the Westinghouse Automatic Air and Steam Coupler Co.; the Westinghouse Machine Co.; Westinghouse Church, Kerr & Co.; the Casper Hewitt Electric Co.; the Nerust Lamp Co.; the Union Switch & Signal Co.; the Pittsburg Meter Co.; the Canadian Westinghouse Co., Limited, and several foreign branches.

## TRADE NOTES.

The Moose Jaw Hardware Co., Limited, Moose Jaw, N.W.T., have now commenced business. The company was organized by John Hawke, formerly a representative of the Gurney Foundry Co., and the business will be conducted by himself and his two sons.



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## TECHNICAL BOOK REVIEWS.

**Electricity Simplified.**—A work on the practice and theory of electricity, by T. O'Connor Sloane, A.M., E.M., Ph.D.; 158 pages, 5x7 1/2 inches; fully illustrated; cloth binding; sold in Canada by the

Book Department of Hardware and Metal, Toronto. \$1.00.

The object of this work is to present in a simple and easily understood form the theory of electricity, and to explain the fundamentals of electricity which are of the greatest importance in practical work. A review of its contents might be made as follows: the ether and its relation to electrical energy; the electric charge, and the consideration of questions in connection; the electric current, E. M. F., resistance and current; electrical units, fundamental and practical; work and energy; the action of currents upon one another and a consideration of the induction coil and its application; batteries, their arrangement and action, including storage batteries; dynamos, motors and transmission of power; the telephone and other electrical apparatus. An extract from the chapter on dynamos gives an idea of the style the book is written in:

"Suppose two electro-magnets, one excited and the other passive, to be mounted face to face, one arranged with mechanism so as to be quickly slid back and forth, toward and away from the other. If the stationary, or field magnet as it would be called, were kept excited by an independent current, and if the circuit of the unexcited magnet were closed, then currents would be induced in the inactive magnet as already explained, first in one direction and then in the other. The contrivance would be an alternating current dynamo."

Such a description, preceded as it is by a description of the induction coil and its principle, is clear indeed and gives a fundamental idea of what an alternating current dynamo is. From the description the principle of the immense alternating current dynamos now on the market can be worked out to one's satisfaction.

**The Modern Machinist.**—A practical treatise on modern machine shop methods, by John T. Usher; 320 pages, 8x5 inches; 250 illustrations; cloth binding; sold in Canada by the Book Department of Hardware and Metal, Toronto. \$2.50.

This is the fifth edition of this work. It is devoted almost exclusively to the

description of the most approved methods, processes and appliances employed at the present time for cutting, shaping, fitting, erecting and finishing metal work, on the vice, floor, lathe, planing, shaping, slotting, milling, drilling, grinding and other machines. In this work the author has deviated from the common practice in writing a treatise on machine shop practice of describing the principles of the operation of the different machine tools and of describing the ideas embodied in the construction of them and also cutting tools. In the work the author has limited himself to the describing and illustrating of methods that can be employed on machines to be found in the ordinary machine shop. The contents of the book are briefly as follows: measuring instruments; vice work; chasing; erecting; planing, shaping and slotting; milling; lathe work; items of interest and drilling.

**Dies; Their Construction and Use.**—A treatise on the design, construction and use of dies, punches, tools, fixtures, devices, together with the manner in which they should be used in the power press for the rapid and economic production of sheet metal parts and articles; by Joseph V. Woodworth; 384 pages, 9x6 inches; 505 illustrations; bound in cloth; sold in Canada by the Book Department of Hardware and Metal, Toronto. \$3.00.

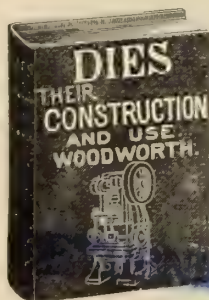
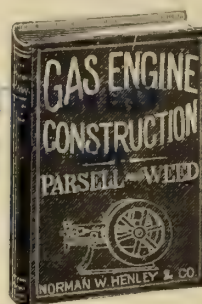
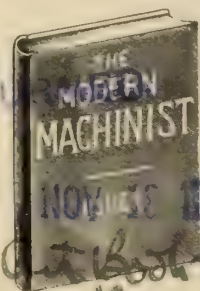
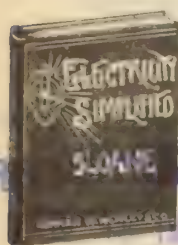
This work comprises fundamental designs and practical points by which sheet metal parts may be produced at the minimum of cost to the maximum of output. Special reference is made to the hardening and tempering of press tools, the use of files and to the classes of work which may be produced to the best advantage by the use of dies in the power press. In the book are reproduced engravings of dies, press fixtures and sheet metal working devices, from the sand blast to the most intricate in modern use, and the author has succeeded in describing them in a clear and practical manner, so as to be of the

greatest value to metal-working mechanics. The contents may be summed up as follows: the construction and use of "single" and blanking dies, and "double" or piercing and blanking dies; simple dies for use in the machine shop; "gang" and "follow" dies; the adaption and use of simple dies and press fixtures for the economic production of sheet metal parts; bending and forming dies and fixtures; perforating dies and processes for thin and heavy stock; curling, wiring and seaming processes; drawing processes for sheet metal shells; the feeding of sheet metal to dies; annealing tool steel and hardening and tempering processes for press steel; miscellaneous dies. This book should be of great value to all practical men in this line.

**Gas Engine Construction.**—A practical treatise describing the theory and principles of the action of gas engines of various types, and also the design and construction of a half horse power gas engine; by Henry V. A. Parsell, mem. A. I. Elec. Eng., and Arthur J. Weed, M.E.; 304 pages, 9x6 inches; handsomely illustrated; bound in

cloth; sold in Canada by the Book Department of Hardware and Metal, Toronto. \$2.50.

This work, the second edition, is meant for the student, the scientific investigator and the amateur mechanic. The first two chapters are solely devoted to the theory of the different kinds and styles of gas engines, while the remaining chapters are devoted to the description of the actual construction of a half horse power gas engine, the illustrations being engravings from photography of the actual methods of constructing the different parts. In the theoretical part the principle of the simple hot air engine is described, then the gas engine in its three forms, including the four cycle or Otto cycle engine, of which type is the half horse power one described. In the construction portion of the work the general design as first described, then the patterns, special tools used in the construction, cylinders, piston, connecting rod, bearing, etc., side rods, bed plate, fly-wheels and shaft, cylinder head, the inlet valve, exhaust valve, valve gearing, governors, igniter and electrical connections, assembling, regulating and starting, carbureters, engine details and their design, vertical engine.





### HOW TO LOSE CUSTOMERS.

"I don't always do," said an old hardware man, in an exchange. "To size a man up by his looks. A sporty-looking man, with an English accent came into my store and said to a young clerk, 'Say, my boy, can I see some of your boots?' This ain't a shoe store," snapped the clerk. 'Can't you see the sign?' 'Is that so?' responded the man. 'I'll look at it from the outside,' and started for the door.

"I had overheard the conversation, unknown to the clerk. I caught the man at the door and asked him to wait a moment. 'Come here, Tom,' I called to the clerk. When he came I said, 'Apologize to this gentleman for your

bad manners.' 'I am sorry,' he said. 'I meant it for a joke.' 'One more such joke,' I said, 'and you'll leave the store for good.'

"I opened a conversation with the sporty individual, and found that he was the new owner of our livery stable and wanted horse's boots. I jollied him up, made good friends with him, and in the next five years sold him several hundreds of dollars' worth of goods, which my fool clerk would have thrown to the other store.

"At another time I saw another clerk waiting on a quiet little woman, with a holed manner, as though he had no use for her. I edged up, opened a conversation just as she showed signs of leaving without buying, and found that she was fitting up her home for a boarding

house, as her husband had recently died. I showed my interest in her case, and before she left sold her \$87 worth of goods, for which she paid spot cash. She became a steady customer, and is trading with me yet.

"When a person comes into my store I always show an interest in them and get them to talk about themselves. That's the best way to make friends of strangers. After a man has talked one of my legs off and I have listened with attention, he begins to feel warm towards me, and would like to do something for me. It's easy enough to sell him goods if he has any notion of buying. If not, he comes around when he needs something. The personal equation is a big thing in the retail hardware business."

P. H.



Trade Mark

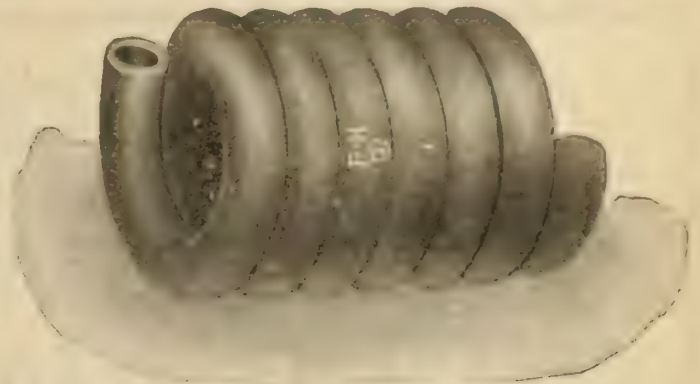
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Pipe

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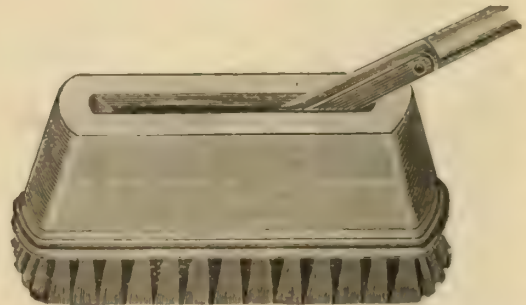


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## CANADIAN NATIONAL EXHIBITION.

IT was surely an inspiration that suggested the first Canadian Industrial Exhibition. At any rate the manufacturers and those interested in the industrial development of Canada have persisted in the idea, and for the last fifty years have spared no pains to make the exhibitions held annually in the different centres of the Dominion of the greatest possible educational significance. Citizens of Canada may see within limited compass the results of the previous years in the varied lines of industrial activity carried on throughout the length and breadth of the country. They may judge for themselves whether there is not magic in the words "Made in Canada," although it is no secret that by far the greater part of the commodities used by them at the present time are manufactured within the boundaries of the Dominion.

Although it would be manifestly unfair to institute comparisons with the World's Fair now in progress at St. Louis, a remark frequently heard from those who have done the great exposit-

tion is worth a moment's reflection, namely, that as an entertainment there is nothing new at St. Louis. Canadian Industrial Exhibitions may not seek to excel as spectacular shows, they have a more important purpose to serve in which the nation is vitally interested. Only a fortnight ago the greatest exhibition western Canada has ever had was brought to a successful close at Winnipeg. This week marks the opening of the premier exhibition of eastern Canada at Toronto. Next week's issue of Hardware and Metal will be devoted largely to an account of the Canadian National Exhibition, with illustrated write-ups of exhibits of particular interest to the hardware and allied trades.

## ORIGINALITY OF IDEA.

ORIGINALITY of thought is the stepping stone to progress. What is needed in business is originality. The manager of a business should be able to produce some original ideas; he should not be afraid to get out of the beaten path occasionally. Those who tread in some other person's footsteps all the time cannot hope to make a greater success than that other person. However, with originality there should be a good understanding.

Originality without sound judgment might lead to ruin. Therefore in being original do not let common sense be trampled under foot; and in getting out of the beaten path let care be taken that the new path does not lead into stony regions where the traveller may stumble and fall, or into briar bushes where he may be retarded and finally arrested by the thorns.

## SEEK ALL THE TRADE THAT PAYS

THE modern hardware merchant is not content to sell hardware and metal staples only. The margin of profit on the staples is so small that the retailer must look to the special lines to materially increase his balance at the baak. The question with many hardware retailers now is, what special lines can I handle with profit. The answer varies according to the enterprise of the merchant and to the locality in which he does business. In a town on the sea coast or

on one of the great lakes a profitable line not carried in the inland towns, supplies and fittings for yachts and boats, have been found well worth attention by many retailers. Some of them, however, do not give this line the attention it deserves. In one town on Georgian Bay, for instance, the retailers give so little attention to the line that a local firm of boat builders makes a practise of sending to a retailer in another town for this class of goods. The local retailers might just as well have this firm's business, but they do not pay sufficient attention to it to induce the boat builders to patronize them.

## MORE PAINT SHOULD BE USED.

ANYONE who travels through Canada, especially in the districts where lumber takes the place of brick or stone for dwellings, cannot fail to notice the small proportion of painting done. One sees house after house which has either never been painted or has been left unpainted so long that its attractiveness is quite gone.

In this condition is an opportunity for the hardware merchant. He should first set a good example by keeping his store and his home, and even his barn, neatly and attractively painted. Then he should be constantly "talking up" the advantages of frequent painting—the preservation of wood, the satisfaction of having an attractive home and store, and finally the enhancement of value of the properties.

By thus setting a good example and by constantly discussing the matter, arousing the interest of his customers in the advantages of painting, the local retailer can do a great deal towards improving the appearance of his neighborhood and can at the same time add materially to his paint sales.

## SPECIAL MACHINERY ISSUE.

As next week's issue of Hardware and Metal will be of particular interest to metal working machinists, foundrymen and general machinery readers the edition will be enlarged to reach all readers of this class in Canada. If you desire to advertise anything to machinery users next week's issue will be of especial value.



# THE STEEL RAIL SITUATION IN CANADA.

**A**FTER an agitation of several months by representatives of the iron and steel companies at Sydney, N. S., and Sault Ste. Marie, Ont., the Dominion Government passed legislation permitting the imposition by order-in-council of a duty of \$7 per ton on steel rails when they should be manufactured within the country in all respects equal to the high standard of quality called for by specifications of the Department of Railways and Canals.

As a result of the reopening of the mills at Sault Ste. Marie and the report of the Government inspectors that the rails produced there were equal to the quality and standard required, the necessary order-in-council imposing the duty of \$7 per ton has been passed. The \$7 duty is fixed for the general tariff, and is subject to the deduction under the British preferential tariff, and to increase on goods brought from countries against which there is now a surtax. The duty shall not apply to any rails actually contracted for abroad prior to this date but, to entitle rails to exemption under this arrangement, they must be imported into Canada not later than the 30th of November, 1904, and must be actually laid on the track in Canada not later than the 28th of February, 1905.

During the years 1902-1903 about 50,000 tons of steel rails were produced at Sault Ste. Marie, this tonnage constituting the production of rails in Canada to date. The imports during the last ten years has been as follows:

|      | Great Britain | Belgium  | Germany   | United States |
|------|---------------|----------|-----------|---------------|
| 1896 | \$ 812,978    | \$ 5,577 |           | \$ 15,093     |
| 1896 | 627,995       | 19,215   | \$ 59,889 | 330,487       |
| 1897 | 677,598       |          |           | 798,259       |
| 1898 | 96,328        |          |           | 1,714,277     |
| 1899 | 92,113        |          |           | 1,982,844     |
| 1900 | 827,145       |          |           | 1,960,721     |
| 1901 | 403,557       | 45,295   | 6,195     | 2,808,801     |
| 1902 | 956,422       | 27,500   | 388,024   | 1,377,297     |
| 1903 | 1,861,780     | 254,636  | 369,260   | 1,470,787     |
| 1904 | 1,850,834     |          | 330,617   | 1,261,480     |

From the above table it will be seen that the Canadian production to date has been insignificant as compared with the importations. Of the 50,000 tons produced in Canada about 35,000 tons were made from a mixture of imported and

domestic ores. These rails were given adequate trial on several of the Canadian railways and found to meet requirements as to strength and durability. About 15,000 tons were made from exclusively domestic ore. The product of this domestic ore was a rail failing to reach the standard of quality required, thus proving that the domestic iron ore at the disposal of the Sault Ste. Marie works to be not of the right chemical properties for the production of Bessemer steel. The fault of the Canadian ore is that it contains too much phosphorous.

In the rails now being produced, about 25 per cent. of the ore used is from the famous Helen mine, owned by the company, in Ontario; the bulk of the remainder is imported. Mr. Cornelius Shields, the general manager of the Sault Ste. Marie properties, stated in a recent interview with *HARDWARE AND METAL* that "the company has completed arrangements for the importation of the necessary ore until next Summer, by which time it is fully expected that ore deposits found in Northern Ontario by diamond drilling and now owned or under option by the company will supply the iron and steel plant with all the necessary ore of the right chemical properties for the production of the highest grade of steel."

Until these mines are opened and proved to be up to expectations, it will be necessary to import approximately 75 per cent. of the ore used.

However, as Sault Ste. Marie is on the direct line between the ore shipping ports on Lake Superior and the point of consumption in the Pittsburg district (the nearest competing centre of production) it is fair to assume that the imported ore can be laid down at the "Soo" at a considerably lower cost than at Pittsburg. Yet, while the cost of manufacturing charcoal and delivering coke at the works has been reduced to a minimum, the charges in this respect will necessarily be much heavier than at Pittsburg, where the coke is practically at hand.

The disadvantage of distance from fuel supply is offset in large measure by the

bounty of \$1.50 per ton on iron made from foreign ore and \$2.25 per ton on steel ingots. If the point is reached where Canadian ore exclusively is used, these bounties will be increased \$1.75 per ton, as the Dominion bounty on iron made from Canadian ore is \$2.25, while the Ontario Government offers \$1 on iron from domestic ore. The total bounty available is, therefore, \$3.75 on iron made from foreign or \$5.50 on iron made from domestic ore, a protection in itself of some consequence though far short of enabling the Canadian producers to withstand the competition of British or United States manufacturers, who have been selling on this market at exceedingly low prices. In fact, United States manufacturers have been cutting prices from the extent of \$8 to \$9.50 a ton.

The general duty is fixed at \$7 per ton yet it must be remembered that this levy is effected by the British preference, the German surtax and the anti-dumping enactment. These did not come into effect in any way as long as steel rails were admitted free but, as may be seen by the table below, these regulations make a serious difference between the cost of importing from Great Britain as compared with either Germany or the United States. The customs duty on steel rails from these three countries is now as follows:

|                    | Regular Duty. | Special. | Total.  |
|--------------------|---------------|----------|---------|
| Great Britain..... | \$4 37        | \$2 33   | \$ 7 00 |
| United States..... | 7 00          | 3 50     | 10 50   |
| Germany.....       | 9 34          | 4 66     | 14 00   |

A glance will suffice to show that the duty is entirely prohibitive as far as Germany is concerned. Not only would the German producers have to meet Canadian competition with the handicap of \$9.34, or when dumping was attempted of \$14, but would also have to give prices from \$2.34 to \$3.50 lower than the American and \$1.67 to \$7 lower than the British producers to have a foothold in Canada.

The British preference should materially influence the situation as between the British and American rail makers. As mentioned above the United States rail makers, while maintaining the price of \$28 in their own market are selling rails



to Canadian railways at from \$18.50 to \$20 per ton. Therefore, any Canadian railway buying under the present regulations at such prices in United States would be compelled to pay a duty of \$10.50 per ton on entry into Canada, so that British rail producers selling to Canadian railways at the regular market price and so, only having to pay \$4.67 per ton, would have an actual preference over the quoted dumped United States rails of \$5.38.

It is maintained by United States authorities that the minimum price at which British rails could be laid down in Canada at a profit would be close to \$20 per ton. Granting this as a basis, the price at which steel rails would have to be sold in Canada by the four countries interested would be as follows:

|                    | New Price. | Duty.   | Gross Price. |
|--------------------|------------|---------|--------------|
| Canada.....        | \$27 00    | -       | \$27 00      |
| Great Britain..... | 20 00      | \$ 7 00 | 27 00        |
| United States..... | 16 50      | 10 50   | 27 00        |
| Germany.....       | 13 00      | 14 00   | 27 00        |

\* Canadian mills will also have bonus of \$3.75, making the price to maker \$30.50

It would seem from the above that as long as Canadian mills can produce rails of the right quality and in sufficient quantity to cope with the demand, they can reasonably hope to maintain their market against any competition.

A point that has been raised, and not without reason, is whether Canadian steel rail mills can be expected to supply the demands of the next few years. The maximum capacity of the present mill at Sault Ste. Marie is 500 tons per day, or 150,000 tons per year. When one considers that the Grand Trunk Pacific alone will call for over 1,500,000 tons of rails in the next eight or ten years and that the present importation is in the neighborhood of 190,000 tons per year, it is at once recognized that the present production is less than half of what will be necessary.

It has been announced that the steel works at Sydney, N. S., will, soon as the works can be gotten into shape, start manufacturing rails. The capacity of the two mills will then be over 300,000 tons per year, an amount greater than the probable demand for a year or two. Moreover, the production can be increased and those in authority at Sydney and Sault Ste. Marie state that there is not the least probability of the production not being sufficient to satisfy the demand.

## PITTSBURG METAL MARKETS

From the Iron Trade Review, Sept. 1, 1904

**R**EPRESENTATIVES of the leading steel interests continue to hold conferences in New York this week. There are many rumors of the action already taken at these conferences, but as yet nothing official is obtainable. It is reported that the Lackawanna Steel Co. has become a member of the beam pool and that no action will be taken with reference to the entrance of this company into the plate pool until later in the year. There are also reports that the official price of billets has been cut, but the leading steel interests deny that any such action has been taken, it being thought best to maintain the nominal \$23 basis and keep the cuts as close to that level as possible.

The trade is awaiting the outcome of these meetings, and in finished lines little new business is being placed. A number of consumers of billets have been in the market during the week, offering to place contracts for billets at priced from \$1 to \$6 below the agreed basis. The recent reduction in wire products was not followed by a corresponding reduction in rods. While sales have been reported as low as \$25.50, Pittsburg, most of the mills are asking \$27. At these prices it is impossible for an independent mill not producing its own rods to compete at the low wire prices that are ruling. That rods would be reduced in proportion to the finished product was of course not expected by the trade, as the move was designed in part to remove the competition of these small finishing mills.

That the demand for finished material is improving, at least among the subsidiary companies of the United States Steel Corporation, is indicated by the resumption of idle stacks. During the past ten days twelve furnaces that have been idle from one to two months have resumed operation.

**Pig Iron**—The iron market continues quiet, and buying is limited almost entirely to small lots for immediate shipment. Bessemer can be had for prompt shipment at \$11.85 to \$11.90 furnace, while No. 2 foundry iron continues to be held at \$12.60 to \$12.85 Pittsburg. On forge iron \$11.85 Pittsburg can be readily done, although a few furnaces are asking \$12. A Westinghouse interest has out one of the largest inquiries of the week, calling for 1,000 tons of foundry iron. The order has not yet been placed. Southern foundry iron can be had on the basis of \$9.25 for No. 2, and if the strike of the coal miners in the Birmingham District had not caused the shutting down of so many furnaces in that region it is believed that the iron could be had on a much lower basis to-day. The Southern situation is by no means strong and little buying is reported by the furnaces in blast. We revise quotations as follows:

|                               |                    |
|-------------------------------|--------------------|
| Bessemer, Valley.....         | \$11 85 to \$12 00 |
| Bessemer, Pittsburg.....      | 12 70 to 12 85     |
| No. 1 Foundry.....            | 13 00 to 13 25     |
| No. 2 Foundry.....            | 12 60 to 12 85     |
| Gray forge, Pittsburg.....    | 11 85 to 12 00     |
| Chilled basic, Valley.....    | 11 75 to 11 80     |
| Chilled basic, Pittsburg..... | 12 60 to 12 65     |

**Steel**—The sale of one small lot of Bessemer blooms is reported on the basis of \$21 Pittsburg. Otherwise there

is little buying, consumers awaiting the outcome of the New York conference. Agreed quotations are as follows: Bessemer and openhearth outlets, 1 1/4 inches, and stacks up to and including 0.25 carbon, \$23 Pittsburg. Wheeling, Valley, Johnstown, Ashland, Ky., Ironton, O., and Lorain, O., 0.26 and including 0.60 carbon \$1 advance, and 0.61 to 1.00 carbon, \$2 advance. Billets smaller than 3 1/2 inches and sheets and tin bars are \$1 per ton extra. Bessemer and openhearth rods are quoted at \$25.50 to \$27.

**Wire and Wire Nails**—Practically none of the smaller independent mills are meeting the competition of the leading interest on wire and nails. With \$27 rods and wire on the basis of \$29 none of the mills that do not produce their rods can compete, and even with rods at \$25.50, the price at which recent sales have been made, the spread is not great enough. We make the following quotations: Wire nails, robbers' carload lots, \$1.60; retailers' carloads, \$1.65, and less than carloads, \$1.75. Painted barb wire, \$1.75 to robbers' in carloads; retailers' carloads, \$1.80, and less than carloads, \$1.90, with 40c for galvanizing. Annealed smooth fence wire is held at \$1.45, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburg, 60 days, with 2 per cent. discount for cash in ten days. Iron and steel cut nails are held at \$1.65 to \$1.70.

**Merchant Steel**—Demand is improving in almost all lines, but it is still far below normal. We make the following quotations: Toe calk, 1.90c; carriage spring steel, 1.75c; tire steel, 1.55c to 1.60c; plow steel, 6 inches and under, 1.35c for Bessemer and openhearth; plow slabs, 1/4 inch and heavier, 1.60c. Drawn and cold rolled shafting is held at 52 per cent. off in carload lots and 17 off in less than carload lots.

**Bars**—The iron and steel bar market continues quiet, although no shading of steel bars is reported in this market. Iron bars are held on the basis of 1.25c Pittsburg, although one of the largest producers refuse to shade 1.30c. We make the following quotations: Bar iron, 1.25c to 1.30c Pittsburg for local delivery, while for western shipments quotations are based on 1.25c to 1.35c. Pittsburg. Hoops are held as 1.55c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; openhearth, 1.40c; plow beams and cultivator beams, 1.45c net, channels, angles, zees and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 pounds of a size, not less than 1,000 pounds, 10c advance, less than 1,000 pounds of a size, 30c advance.

**Coke**—The resumption of thirteen idle stacks, one independent and twelve of the Steel Corporation will necessitate the firing of 3,000 idle ovens. About 10,700 ovens are idle at present in the upper and lower Connellsville District, but before the end of the week it is expected that this number will be reduced to below 8,000. Future coke is somewhat firmer and Connellsville is held on the basis of \$1.10 for delivery the remainder of the year. Foundry coke continues to be held at \$1.85 to \$2, although a few grades command somewhat higher prices.



# MARKETS AND MARKET NOTES

## QUEBEC MARKETS.

Office of HARDWARE AND METAL,  
232 McGill Street,  
Montreal, Sept. 1, 1904.

**U**NLESS something at present unforeseen happens, the Fall hardware season promises to be one of the best the trade has yet had. A buoyant tone is the feature of staple lines, while Fall goods are particularly active. Business is brighter than last week, with every indication of a continuance of the same. Up to the present time hardly as large a volume of trade has been done in some quarters as in previous years. This is due no doubt, to the backward Spring season, for in these districts trade is now unusually brisk.

No changes of price are noted this week, but the reductions in cordage, cement and wire, mentioned a week ago, still hold. The cement business which has been dull all summer has opened up in a fairly promising manner.

Food choppers and corn cutters are leaders at present, and many orders are being placed. Last week's cut nail market read \$2.50 per keg, which should have been \$2.30.

**Food Choppers**—One of the most active lines in the hardware trade at present. We quote, smallest size \$1.05 each net; medium family size \$1.20 each net; large family size \$1.35 each net.

**Corn Cutters and Huskers**—The season for these has opened up well, with every promise of a large turn over. We quote: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to \$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

**Agricultural Wrenches**—The demand for these has fallen off slightly, but is still fairly good. We quote as follows: 6 in., \$2.85 a dozen 8 in., \$3.15; 10 in., \$3.45; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

**Grindstones**—The season has been a good one for this line, more so than usual. We quote as follows: 40 to 200 lbs., 2 in. and over thick, \$1.10 to \$1.20; 20 to 40 lbs., 2 in. thick and over, \$1.20; 11-2 in. thick and under 2 in., \$1.30.

**Skates**—A few orders have already been received from the west, but the season's trade in skates has not yet

begun. We quote the following prices: Halifax pattern, plain, 38c a pair; nicked, 60c a pair; Ladies nickel plated, plain 58c a pair; good quality, \$1.25 a pair; good quality concealed, \$1.50 nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop \$1.30 a pair, high grade nickel plated, concealed \$1.60 a pair.

**Hockey Sticks**—Prices are: Second growth men's \$4.00 a dozen; second growth ash, men's, \$3.30 a dozen; rock elm \$2.35 a dozen; boys' elm, \$1.50 a dozen.

**Hockey Pucks**—Price quoted for coming season is \$2.10 a dozen.

**Lanterns**—Lanterns are moving briskly, we quote as follows: Cold blast, \$7 a dozen; No. 0 Safety, \$4 a dozen.

**Sleigh Bells**—Sleigh bells are already being placed on the market, although no large volume of trade has yet been done. Our quotations are: Brass team bells, rough \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5.00 a dozen; nicked \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3.00 each.

**Washing Machines**—This market is somewhat quieter than before. We quote: Round (three legs) \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

**Wringers**—Not many orders for these have been reported. We quote as before, discount 33 1-3 per cent.

**Currycombs**—The demand continues brisk with no change in price. We quote as before, discount 37 1-2 per cent.

**Heavy Screw Hooks and Hinges**—Merely a nominal trade being done. We quote the following: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

**Wire Coat and Hat Hooks**—No new feature for this market. A fair trade

continues. Prices 75 cents a gross for three inch.

**Annealed Wire**—An active market is reported. The new price quoted recently still holds. The price of annealed wire which was \$2.50 per hundred pounds, was lowered to a base of \$2.25.

**Fence Staples**—A fair amount of business is being done. We quote: \$3 per 100 pound keg for galvanized, and \$2.80 for bright; 25 to 50 lb. packages, 25c extra.

**Barb Wire**—The market continues lively, owing to the revival for Fall orders. Little fencing is being done at present, but orders are being placed ahead in anticipation of considerable business. Our quotations are the following: \$2.75 per 100 lb. f.o.b. Montreal, and \$2.50 f. o. b. Cleveland. Car lots of 15 tons, \$2.40 f. o. b. Cleveland.

**Galvanized Wire**—Business is dull as the new prices noted last week have had little effect in stimulating trade. The new prices are: In carlots f.o.b. Montreal, Nos. 6, 7 and 8, \$2.95; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f.o.b. Cleveland, Nos. 6, 7 8 and 9, \$2.02 1-2; No. 10, \$2.07 1-2; No. 11, \$2.12 1-2; No. 12, \$2.17 1-2; No. 13, \$2.27 1-2; No. 14, \$2.37 1-2.

**Rivets and Burrs**—Business continues good throughout in nearly all lines. Discounts are: Best iron rivets, section carriage and wagon box, black rivets, tinned do., coopers' rivets and tinned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

**Screws**—There seems to be no off season for this line as the demand keeps up and continues brisk throughout. Discounts are as follows: Round head, bright, 82 1-2 per cent.; flat head, bright, 87 1-2 per cent.; brass, round head, 75 per cent.; brass flat head, 80 per cent.

**Bolts and Nuts**—The market for bolts and nuts is strong. Sleighshoe bolts are in unusual demand. Prices and



discounts remain the same. Quotations are: Carriage bolts, common (\$1 list), 3-16 to 3-8 diameter, 60 and 10 per cent.; carriage bolts, common (\$1 list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

**Cut Nails**—Our quotations last week gave the market price for cut nails \$2.50 per keg, this should have been \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

**Wire Nails**—As mentioned last week no change in price has been officially announced by the manufacturers, as it is impossible in the present state of the market to obtain exact quotation. Our nominal prices, as given before, are left unchanged. It is well understood, however, that the old figures no longer apply, and that while competition continues as keen as is at present, the actual price at which business is done, is in all cases a matter of individual bargaining. Quotations are \$2.40 per keg in lots, and \$2.45 per keg in small lots, f.o.b. Gananoque, Montreal, London, Hamilton, Toronto, Brantford and St. John.

**Pressed Spikes**—A quiet market prevails. The discount of 25 per cent. remains.

**Horseshoes**—Horseshoes are in good demand throughout. Quotations are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 6 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

**Horsenails**—The trade in horsenails is fairly active. We quote: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb.

Trade discount C brand 40, 10 and 7 1-2 off list. Other brands 55 and 57 1-2 per cent off list.

**Sporting Goods and Supplies**—The season has opened up well, and gives promise of unusual activity. Prices of the different lines on application.

**Shot Guns and Rifles**—While shot guns are moving well, and in good demand, fewer rifles are being ordered this season than last. Prices remain the same.

**Ammunition**—The Fall trade in ammunition has so far been a good one, dealers report larger orders than usual. Canadian goods seem to be especially active. Our quotations are as follows: Rim fire cartridges, 30 and 2 1-2 per cent. discount from list; centre fire, 5 per cent. advance on list; loaded shells 17 1-2 per cent. discount from list.

**Roofing Pitch**—The demand continues fairly good, the price stands as before, \$1 per cwt.

**Building Paper**—Manufacturers and jobbers state that trade in this line continues fairly good with little change. Fall orders have been coming in well. Prices remain the same. We quote as follows: Tarred felt, \$1.85 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

**Cement**—This has been a unique season for cement. The Winter and Spring quietness led to the belief that the Summer would see a big change for the better. No marked change occurred, however, and the Summer has seen but little business doing. The hopes of cement dealers are now centred on Fall trade, which has opened up in a fairly promising manner. The following are our quotations: English, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel, ex store; and American \$2.15 to \$2.35, ex cars.

**Cordage**—Trade continues fairly good. The reduction of one half cent per pound each on British Manila and sisal rope still holds. We quote: British pure manila, 11c; pure manila 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton

bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

## METALS.

Considerable improvement is noted in the general metal market within the past week. Some lines have become stronger and in much more active demand. Advices from England state that the C.P.R. Atlantic steamships sailing from Avonmouth for Montreal, have been cancelled after October 1st. This leaves only one line, the Dominion, for ships sailing from that port, and consequently some importers may not receive their goods this Fall. British manufacturers are now asking for specifications for all goods required before the close of navigation. The pig iron market is quiet, little or nothing being done in imported iron. Pig lead has advanced in the United States, creating a stronger feeling in this market. The shortage in pig lead and copper has been caught up with somewhat. Sheet zinc is quoted one-eighth cent per pound advance. Quietness still prevails in the scrap metal market, but prospects are brighter. Little scrap iron is being brought in at present by collectors, the price of rags being so low that little collecting is being done. No advance is reported although the market continues strong.

**Pig Iron**—Prices remain the same throughout. The market is quiet and almost nothing is being done in imported iron. We quote.

|                                             |                                        |
|---------------------------------------------|----------------------------------------|
| "Disc." No. 1.....                          | \$17.50 delivered Montreal             |
| "Dom." No. 1.....                           | 18.50 "                                |
| Usual difference in price for lower grades. |                                        |
| Ferrona No. 1.....                          | \$18.00 delivered Montreal.            |
| " No. 2.....                                | 17.50 "                                |
| " No. 3.....                                | 16.50 "                                |
| " No. 4.....                                | 16.00 "                                |
| Londonderry.....                            | \$18.50 to \$19.00 delivered Montreal. |
| Summerle.....                               | 18.50 "                                |
| Glengarnock.....                            | 20.00 "                                |
| Gart-herrie.....                            | 19.25 "                                |
| Carnbroe.....                               | 18.50 "                                |
| Carron No. 1.....                           | 19.00 "                                |
| " (special).....                            | 17.50 "                                |
| Ayresome No. 1.....                         | 17.50 "                                |
| " No. 3.....                                | 16.90 "                                |
| Clarence No. 1.....                         | 16.25 "                                |
| " No. 3.....                                | 16.00 "                                |

**Bar Iron**—The bar iron situation is more satisfactory. There is a brisk demand at present with no change in price. We quote: Merchants' bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2; net cash 30 and 15 per cent.

**Tool Steel**—The demand continues good. The market is strong but no change is reported. We quote as follows: Black Diamond, 8c to 9c. Scanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Col-



vet's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1/4c. Conqueror High Speed steel, 60c.

**Merchant Steel**—This has assumed a somewhat firmer tone. The market is steady. Quotations are as follows: Sloughs, \$1.30; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.35; machinery (iron finish), \$2; square harrow, \$2.45; reeled machinery steel, \$2.75.

**Canada Plates**—The market is stronger on account of the higher price in England. The demand keeps up well, in fact even better than the supply. We quote as follows: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

**Black Sheets**—The market remains unchanged. The demand is good as large orders are being received for Fall import. Prices quoted are still subject to concessions. We quote: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge, \$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

**Galvanised Iron**—The galvanised iron market continues steady. It is fairly strong, with a good demand. We quote as follows: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 gauge, \$3.55; Appolo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28 gauge, \$4.30. "Windmill Best," 28 gauge, \$4. In less than case lots, 25c extra.

**Shee Zinc**—The market continues strong. An advance of one-eighth cent a pound is noted this week. The demand is only fair. We quote case lots at \$6.37 1-2 to \$6.62 1-2, and small quantities at \$6.62 1-2 to \$6.87 1-2.

**Tin Plates**—Considerable activity is reported in tin plates for Fall import. The market continues firm. We quote: Cokes, \$3.75 and charcoal, \$4.

**Ingot Tin**—The market, which for some time has been weak, is now quite firm with a strong tendency towards higher prices. Quotations are: 30c to 30 1-2c.

**Ingot Copper**—The scarcity that existed in ingot copper for a few weeks past, is hardly as apparent at present. The market continues very firm. Quotations are: 13 1-2c to 13 3-4c. The

former price is for quantities only, and is firmly held at that.

**Pig Lead**—An advance in the United States has created a firmer feeling in the market here. The scarcity has been reduced somewhat. Prices remain unchanged. We quote: \$3.25 to \$3.35.

**Scrap Metal**—Quietness still prevails in this market, but prospects are brighter. Little scrap iron is being brought in at present by collectors, the price of rags being so low that little collecting is done. No advance is reported although the market continues strong. We quote: Heavy copper and wire, 10 'o 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$10; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

**Coil Chain**—The demand is not at all brisk, and the market has assumed a somewhat weaker turn. There is no noted change in price. Our quotations are as follows: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on earlots.

## ONTARIO MARKETS.

Office of HARDWARE AND METAL,  
10 Front street east.  
Toronto, Sept. 2, 1904

**T**HERE is nothing very important to note on the market this week.

Trade in all lines is very steady, and the outlook is for a good Fall trade depending of course upon the wheat crops in the west, and also upon the general crops in Ontario. There are many conflicting reports as to the outlook for the wheat, crop returns in the west. However, as the wheat is not affected by rust, as is feared, it will be in some districts, and if there are no untimely frosts, there will probably be a good crop, some reports putting the number of bushels yield above that of last year.

Fall sporting goods are very active at the present time, and wholesale houses are preparing to supply orders for Winter sporting goods. Retailers as yet are not placing orders, however.

A reduction has been made in barb wire of 25 cents per 100 lbs. This is the direct result of the reduction made by the American Steel and Wire Co.,

which were followed by concessions by the Pittsburg Steel Co.

The manufacturers of coiled spring wire have confirmed the existing prices of coiled spring wire, and there will be no change.

**Sporting Goods**—There is a very active demand for Fall sporting goods of all kinds. Wholesalers are beginning to stock Winter sporting goods and are preparing to supply demands. However, as yet, no orders have been placed by retailers.

**Shot Guns and Rifles**—The demand for this line is quite brisk, and is on the increase.

**Ammunition**—There is a very good demand, and it will probably continue throughout the Fall. Quotations are: American rim fire cartridges, 30 and 21-2 discount from list; American centre fire, 5 per cent. advance on list.

**Harvest Tools**—Trade is over in this line for the season. There are, however, a few lines of Fall goods still selling 60 per cent. off.

**Washing Machines**—There is very fair demand for this line. We quote: Round reacting washer, per dozen, \$56; square reacting washer, per dozen, \$59; Eclipse, \$48; Dowswell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

**Woodenware**—A very fair business is being done. Quotations are unchanged as follows: Tubs, No. 0, \$11.25; No. 1, \$9.00; No. 2, \$8.00; No. 3, \$7.00; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2.00; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

**Steel Track Door Hangers**—There is little change in the situation. Business is very fair for this season.

**Chain**—The demand is fair. Prices are quoted as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

**Step Ladders**—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

**Barb Wire**—There has been a reduction in barb wire of 25 cents per 100 lbs. This is the direct result of the reduction made by the American Steel and Wire Co., followed by concessions by the Pittsburg Steel Co. Trade is quiet. Changed quotations are as follows: \$2.50 per 100 lbs f.o.b. Toronto and \$2.25



## PORTLAND CEMENT

CANADIAN, ENGLISH,  
GERMAN and BELGIAN.  
FIRE BRICKS, FIRE CLAY,  
ENAMELLED BRICKS, all colors.  
BUILDING BRICKS.  
SEWER PIPES, CULVERT PIPES,  
WHEELBARROWS,  
FOUNDERS' and CON-  
TRACTORS' SUPPLIES.

### F. HYDE & CO.

WELLINGTON ST., MONTREAL

## Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

## CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required: Strong, High Silicon Iron, for Foundry Purposes.

## "MIDLAND"

BRAND

## Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Price to Sales Agents

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MONTREAL, QUE.

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Canada Iron Furnace Co.

MIDLAND, ONT. Limited

We invite inquiries for

## Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,  
CANADA PLATES, TINPLATES, WIRE ROPE  
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS  
ORE BAGS, GRAIN BAGS, ETC.

C.F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,  
and LIVERPOOL, ENGLAND.

f.o.b. Cleveland. Carlots of 15 tons,  
\$2.15 f.o.b. Cleveland.

**Galvanized Wire**—There is a fair amount of business being done. Quotations are: No. 5, \$3.15; Nos. 6, 7 and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$4. Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

**Coiled Spring Wire**—Trade is very quiet. Manufacturers have confirmed existing prices, and so there will be no change. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

**Wire Nails**—The situation on this market is unchanged. Cutting in prices still continues, and prices range according to the agreement made between retailer and wholesaler. Nominally prices remain unchanged at \$2.45 per keg f.o.b. Toronto, with car loads at \$2.40.

**Cut Nails**—A moderate trade doing, with prices steady at \$2.30 per keg f.o.b. Toronto and Hamilton.

**Horseshoes**—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

**Horsenails**—Business is fairly good in this line. Prices remain unchanged. Quotations are: "C" brands, 40 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

**Screws**—A very steady demand keeps up. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

**Rivets and Burrs**—A steady and brisk demand continues. Prices remain unchanged. We quote: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.

**Bolts and Nuts**—There is a very fair trade being done. Prices are unchanged. We quote as follows: Carriage bolts,

## Sheet Zinc Sheet Copper

and other Metals.

From Stock or for Import.

### A. C. LESLIE & CO.

509-512 Merchants Bank Building,

MONTREAL.

## McDOUGALL STANDARD PUMPS



and the hard usage better than any other pump made, as they are composed of iron and steel, which wears much better than wood.

They are MADE IN CANADA, by Canadian mechanics, and you should handle them in preference to foreign makes.

Send for catalog.

The R. McDougall Co., Limited  
GALT, ONTARIO.

## "ALPHA" HIGH SPEED STEEL Crucible Cast Steel

for Tools of all kinds.

## "B.C." Miners' Drill Steel

B. K. MORTON & CO.  
SHEFFIELD, ENG.

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D. W. CLARK, P.O. Box 520, Toronto

## NOVA SCOTIA STEEL & COAL Co., Limited NEW GLASGOW, N.S.

Manufacturers of

## Ferrona Pig Iron

And SIEMENS MARTIN

## OPEN HEARTH STEEL



common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

**Cordage**—The season for binder twine is now over, and quotations are now dropped. The reduction made in British pure manila and sisal still hold. We quote: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sasheord, "Hercules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5.32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 24c; 4 ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

**Building Paper**—The demand for this article has picked up during the week, everything points to a good Fall trade. Prices remain the same and are likely to do so until the end of the year. We quote: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

**Firebrick**—The demand for firebrick continues fairly good. Prices are unchanged. We quote the following prices: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

**Cement**—During the week this market has become very dull. Prices are now down to the lowest notch or another slump might be expected. Our quotations are: Canadian Portland, \$1.70 to \$2; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2; ex-store, American Portland, \$1.80 to \$2.10 f.o.b. Toronto.

#### METALS.

There is a much better feeling on the market this week, and there is a very good showing for Fall trade. There are many conflicting reports regarding the wheat crop out west, and until it is settled as to how the crop will

# STANDARD LIGHT PRODUCERS

**Banner Cold Blast Lanterns.**

**Climax Tubular Safety Lanterns.**

**Safety Wall Lamps.**

**Banner Lamp Burners.**

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FOR SALE BY ALL PROMINENT DEALERS.

WRITE FOR PRICES.

**WALTER CROSE, Montreal**  
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**ONTARIO LANTERN & LAMP CO., LIMITED**  
HAMILTON, ONT.



## THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs  
Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.

At Home to you at the  
**TORONTO EXHIBITION**  
in the Automobile Building

**John Millen & Sons**  
Montreal and Toronto

## "COMET" Brand Galvanized Sheets

These sheets are NOT the most expensive, but that does not mean that they are not the best. We charge only for the goods—not for the name. A trial will convince you.

**W. Gilbertson & Co., Limited, Makers, Pontardawe, Wales**  
ALEXANDER GIBB, Agent, - - MONTREAL

turn out, there will probably be a rather unsettled market, because of buyers holding off. There is a somewhat stronger market for tin this week, and also a more active demand for galvanized sheets. Canada plates are active this week, and brass and lead are more active. There is an improved demand for zinc spelter.

**Pig Iron**—Buyers of foreign iron are still buying in small lots, car loads, and seem to be hesitating about placing large orders. As far as Canadian iron is concerned, however, there is a very active demand.

|                              |                  |
|------------------------------|------------------|
| Middleboro, f.o.b., Toronto  | \$18 70          |
| Hamilton, No 1               | \$17 00 to 18 00 |
| " No 2                       | 17 00 to 17 20   |
| " No 1, Hamilton             | 16 25 to 16 55   |
| Midland No 1                 | 17 00 to 18 00   |
| " No 2                       | 17 00 to 17 25   |
| " No 1 f.o.b. Midland        | 16 25 to 16 75   |
| Radnor, f.o.b. furnaces      | 27 50            |
| Londonderry, f.o.b. furnaces | 16 50 to 17 00   |

**Bar Iron**—A good business is being done and prices are firmly maintained.

We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

**Steel**—A very good demand is reported, and prices are steady. Quotations as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

**Tin**—The market is improving, and is quite strong. Prices remain unchanged. Quotations are from 30c to 31c.

**Galvanized Sheets**—This market has improved, and there is an active demand



this week. We quote as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

**Tin Plates**—There is a very good demand, with prices unchanged. Stocks are light. We quote the following: Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

**Canada Plates**—There is a very good demand. Prices remain unchanged. We quote: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

**Copper**—Both ingot copper and sheets are active. Prices are steady, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

**Brass**—This market is more active this week. Discounts are steady at 15 per cent.

**Lead**—Prices are quite firm, and there is an active demand this week. We quote \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

**Zinc Spelter**—There is an improved demand on this market. Prices are from 53-4c to 6c per lb.

**Solder**—This market has picked up and is active. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

**Antimony**—The market exhibits activity this week. Quotations are: 71-2 to 8c per lb.

**Old Material**—The demand for old material has picked up during the past week, and there is an outlook for brisk trade during the next few weeks. The demand for iron, however, is very small, and another slump in prices is expected. Market for old rubber shows a marked improvement, and there will probably be a good demand all Winter. Old rubbers is firmer this week and is quoted 41-2c straight. Quotations are: Heavy copper and wire 101-4c per lb.; light copper, 91-2c per lb.; heavy red brass, 9c 91-4c per lb.; heavy red brass, 7c per lb.; heavy yellow brass, 7 to 71-2c per lb.; light brass, 5 to 51-2c per lb.; lead, \$2.20 to \$2.40 per cwt.; scrap zinc, 31-4c per lb.; iron, No. 1 wrought, \$8 to \$9; No. 2 wrought \$2; machinery cast scrap, \$10 to \$11; stoveplate, \$8 to \$9; malleable and steel, \$4; old rubbers 41-2c per lb.; country mixed rags, 60c per 100 lbs.

**Petroleum**—Prices remain unchanged on this market. The demand continues steady. We quote as follows: Canadian water white, 17 1-2c; Canadian prime

white, 16c; American water white, 18 1-2c, ex-warehouse.

### TRADE CONDITIONS IN BRITISH COLUMBIA.

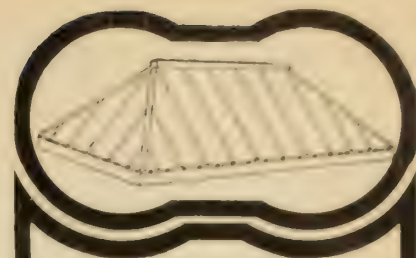
Special correspondence of HARDWARE AND METAL.

**T**HE hardware trade throughout the province continues good, with prospects that conditions will be maintained if not improved. There is activity in many lines in the vicinity of Vancouver, which makes trade excellent. Work on a \$72,000 contract is proceeding at the Britannia mines; new telephone lines are being laid to Victoria at a cost of \$100,000; large extensions are constantly being made to the telephone system in this city; last Saturday the initial trip was made on the Vancouver, Westminster and Yukon Railway, and the president announced that as soon as possible the construction of the road through to the north would be undertaken; development is taking place in interior mines, and J. T. Wilkinson, who has just arrived from Atlin, tells of good progress in that district, with wide extension of the work. With such conditions as these on all sides, Vancouver trade should be good. The Grand Trunk Pacific people will be here next week, and in this connection Hon. Raymond Prefontaine stated that construction on the Pacific coast end would begin simultaneously with that at Winnipeg. This should bring business to this city also.

\* \* \*

The development of the iron industry in this province is indicated in the establishment of the stove works at Ladysmith, on Vancouver Island, immediately opposite Vancouver. The provisional officers have been appointed, and with a capital of \$50,000, a start is to be made in the manufacture of stoves of all kinds on an extensive scale. The promoters are satisfied that success will be theirs, for they have before conducted business on a small scale and have some idea of conditions.

Another industry for the manufacture of steel will open in Vancouver at the first of next week. That is the E. J. Burton Saw Company, which will manufacture saws for the Canadian lumber trade. Heretofore these have been imported with a 30 per cent. duty, and the company proposes to give the trade just as good an article as that brought in from the United States, at 30 per cent. less cost. The plant has entailed an expenditure of \$20,000, and is now ready



### Metallic Skylights

The acme of Skylight perfection!

We make them from hollow bars of Copper or Galvanized Steel—in styles and sizes to suit all kinds of roofs.

They are very strong, and unaffected by cold or heat, as there is neither contraction nor expansion—and, if glazed with our fire-proof wired glass, they are absolutely fire-proof.

**METALLIC ROOFING CO., Limited,**  
Wholesale Manufacturers,  
TORONTO, CANADA.

for operation, the only delay being for the steel to arrive, which is brought from the Jessop works, Sheffield.

\* \* \*

News from Atlin should be of interest to dredge builders and to those who furnish mining supplies. Mining there is going more steadily forward than in any other part of the province, and the development work of the past year has in every instance disclosed fine properties. The dredge now being operated has been successful, and more are contemplated. Some of the owners are putting in heavier machinery. At White Horse, where there are some excellent copper prospects, shipping has begun, and the outlook is so promising that the optimistic of the operators believe that the erection of a smelter is not far distant. This district in the norther part of the province is directly tributary to Vancouver.

\* \* \*

One of the prominent visitors to the city this week is John Weaver, Mayor of Philadelphia, who expressed himself to-day as greatly pleased with Vancouver's situation as a business centre, and prophesied great development.

The firm of McLachlan Brothers, who recently started up a hardware business in this city in conjunction with their house in Nelson, has been changed to the McLachlan Bros., Limited, to take over the business here.

The Sandon Hardware Co., located in



the town of that name, in the interior, is out after the business of the mining men, and has just received two earloads of assorted requisites from the east to meet the demands of the trade.

The International Roller Bearing Co., Limited, has been incorporated as a provincial limited company, with a capital of \$125,000 to purchase, acquire and control all rights and interests in and to the patents granted John Kincaid, inventor of the Kincaid roller bearings.

News from Edmonton is that much interest is being taken in the concrete stone for the Bank of Commerce building there, which has arrived from Toronto. It is intended to face the brick structure, and being new in the west, contractors generally are watching the results of the experiment.

Another item of interest to the trade from Edmonton is that the order for the steel girders for the Hudson's Bay block placed with a firm in Antwerp, Belgium, has been cancelled, and given to a firm in Chicago.

The British Columbia Box Company has been incorporated with a capital of \$25,000, to carry on the business of manufacturing, selling and dealing in boxes, etc., with all its kindred branches.

The supplanting of coal by oil as fuel in steamers is steadily coming northward. The Alaska Steamship Company, at an expense of \$9,000, is to equip the steamers Dolphin and Rosalie with oil burners, the contract having been let to a Seattle firm. The Dolphin is on the Skagway run, and often comes into Vancouver, while the Rosalie plies between Seattle and Victoria.

R. Dunsmuir & Sons are after the ore carrying trade from the Treadwell mines to the Tacoma smelter, and have sent an agent to New York to secure a freighting steamer of about 3,000 tons capacity for the purpose. Coal is taken north as return cargo.

### "WHAT CAN I DO?"

**Y**OU will never be a partner unless you know the business of your department far better than the owners possible can. Instead of the question, "What must I do for my employer?" substitute "What can I do?" Faithful and conscientious discharge of the duties assigned to you is all very well, but it will not do for the coming partner. There must be something beyond this. The rising man must do something exceptional, and beyond the range of his special department.

There is no service so low and simple, neither any so high, in which the man of ability and willing disposition cannot readily and almost daily prove himself capable of greater trust and usefulness.

CARNEGIE.

## A CRITICISM OF INSURANCE METHODS AND OTHER SUBJECTS.\*

By C. C. BALLANTYNE, Montreal.

**T**HE fire insurance situation throughout Canada generally is in a very undesirable condition, he stated, and this fact is patent not only to the average merchant but is also admitted by many of the insurance men themselves.

The elemental causes of this situation are: First, that a great volume of business is being placed with United States corporations, who have thrown off antiquated and adopted modern methods; and, second, that Canadian industries that are continuing to insure in board companies are being burdened with abnormally high premiums, sometimes reaching as much as the total expenses of taxes, rent, fuel and light.

I am pleased to see, however, that the local insurance companies have at least decided to adopt the system of specific rating. The manufacturers of this city have urged this upon the underwriters of this city for some time past, but with no success.

The very large majority of sprinkler risks in this city are carried by United States companies; in fact, it is almost safe to assume that whenever you see a water tank for sprinkler purposes, in connection with a manufacturing plant, such risk is being carried by an American company. The Canadian Fire Underwriters' Association's policy in the past, of rating different classes of manufacturing businesses at fixed rates, irrespective of the individual character of the risk, has always been, to my mind, a most peculiar way of doing business.

The Canadian Underwriters' Association have not in the past attached sufficient importance to the use of fire sprinklers and other independent fire appliances. There followed as a consequence that the American insurance companies to-day have the large majority of the safe manufacturing risks in this city at rates that are profitable to them.

Why then, should not the Canadian Fire Underwriters' Association and the insurance companies urge all manufacturers to put in sprinklers and to provide all modern fire precautions, the same as the American companies are doing, and subsequently rate each risk on its merits and keep the insurance of the Canadian manufacturer in the country? To my mind this would be preferable to their policy of not encouraging the provision of these modern facilities, a policy, which, on account of its high rates, drives the insurance out of the country.

### THE RECENT PREMIUM INCREASE.

The recent increase of fifty cents in the congested districts of the city has brought it home to us that some definite action must be taken to ameliorate affairs. I am not inclined to take the view that the city is without fault in this matter. There is much to be done, particularly towards increasing the pumping capacity, so that there will be a reserve in the Winter months, and also towards making uniform and increasing the size of the water mains in the congested district. And yet we

must bear in mind that the city has done much in the past three years to improve the fire fighting service—improvements which have received scant recognition at the hands of the insurance companies. Those of us who have had dealings with the board insurance companies know that they adopt every pretext to maintain or increase rates. This last general increase, made upon a letter intended merely and patently to hurry the council in the purchase of boilers, is only an instance.

The sooner the system of commission is abandoned, the better, for I am convinced it will change the whole tenor of the insurance business. The fact that about 35 per cent. of the premiums received by Canadian board companies is consumed in expenses of management, as compared with the expenses of 6 to 9 per cent. on the part of the United States factory mutual insurance companies, is striking evidence of their lack of business methods. Even on sprinkler risks, United States companies quote rates in this city at times from one-sixth to a half of the lowest rate offered in Canada. There are concerns in this city of several hundred thousand dollars capital virtually paying their dividends from the saving effected by insuring in United States companies, who are wide awake enough to operate on a modern scientific basis.

### TO FORM A MUTUAL CO.

I, therefore, heartily commend the movement within this association to form a mutual fire insurance company, and, as a member of the committee appointed by the executive council to draft a plan, I would assure you that a definite proposition will be laid before you at our annual gathering in September, conservative in its inception, but comprehensive in its ultimate ambition. We feel assured you will give it your hearty support, as you do any other branch of the association's work, in order that ultimately we may bring back to Canada the insurance which circumstances have compelled us to place across the frontier. I am sure it is the policy of every member, as it is of my own firm, to give the preference on every occasion to Canadian and British companies; but, as there has been such a vast difference in the rates, it has not been possible to comply with our desires. The object of the movement we are inaugurating will be, as I have said, to bring this business back to Canada, whence it should never have been allowed to depart.

### DANGEROUS LEGISLATION.

In recent provincial legislation the most inimical to the interest of the employer is the Compensation Act, introduced into the Legislative Council by the Hon. Mr. Archambault.

Under the existing law as interpreted strictly, that person through whose fault or negligence an accident occurred, bore the responsibility. Under the proposed bill, however, which is likely to be pressed next session, the employers are held responsible for all the consequences of any accident, even

\* Delivered before the Montreal Branch of the Canadian Manufacturers' Association.



though they might not be at fault, and that to the same extent as they would be were they liable for the accident. In other words the consideration of fault was eliminated, and the employer must compensate either the injured or their family for all accident, irrespective of how the accident occurred, except of course when the latter was committed intentionally which, of course, was never admitted nor proven.

It would appear from Mr. Archambault's remarks that this most dangerously heavy burden is being placed upon the employer because he can afford it. I should like to point out also to the learned gentleman that, while it is the employer who pockets the profits of the enterprise, it is also he who pockets the losses. True, we handle large amounts of money, on account of the concentration of capital under the factory system, but with that amount of capital we are expected to earn a corresponding amount of profit, rather than enjoy therewith the pleasure of being charitable.

I believe that manufacturers should be compelled by strict police regulation to render their machinery as harmless as possible, but, having done so, I strongly affirm they are not to be held responsible for fortuitous events, or the imprudence or carelessness of workmen. As the Attorney-General points out, the courts are going beyond that point, and I believe it would be more in order to have legislation enacted that would prevent them from doing so.

The minister claims that the bill would restrict litigation, but after examining the measure, I am convinced its chief result will be to increase litigation. In any event, if it ever should become law, it would be the death knell of many industries in this province, and at the same time be no guarantee of compensation to the workmen. It should have our unyielding opposition.

#### MONTREAL MUNICIPAL AFFAIRS.

During the past year the association has been compelled to act in opposition to a proposed action of the city and has been compelled to advocate a course directly opposite. I trust that the city will never again entertain the idea of imposing a special tax upon any line of industry. A few months ago a deputation was sent to Quebec to oppose the city's request to tax varnish and similar manufacturers to the extent of \$100 a year. It was successful in having the clause struck out of the city bill, and the chairman expressed the hope that the association would at all times strongly oppose such inequitable methods of taxation.

I do not mean to infer that we should oppose every form of taxation. I am not even sure that our present rate of taxation is sufficiently high, and I feel I am at liberty to say that, if the city council should make out a good case, showing its present income is not sufficient to meet its obligations, the manufacturers of the city will be last to complain at the prospects of an increase. We realize that the council must have finances, and we are perfectly willing to pay whatever is necessary for the good government of the city, we only insist that taxes should be levied equitably. We base our opposition to the special tax upon electric motors and license fees upon plumbers, engineers and stokers, upon the same grounds. These were a

flagrant violation of the principles of equitable taxation.

This special tax upon engineers and stokers last year brought the city only \$257, while that upon plumbers netted the city \$471. There was no reason, hidden or unhidden, for the imposition of yearly taxes upon any class of workmen.

#### WATER RATES TOO HEAVY.

The wisdom of levying heavy water rates, in order to raise the funds to pave the street, apparent. The charge for water should be a business charge, based upon the cost of production, not only in justice to our private citizens, but more particularly in justice to our manufacturers in whose costs water rates are an important item. It is not in the interest of the city that the cost of manufacturing should be made high, in comparison with the cost in competing cities. The manufacturer in Montreal must pay at the rate of 18c per 1,000 gallons, while his confrere in Toronto pays only 6½c per 1,000 gallons. While this difference may be offset in many cases, by the lower rate of taxes in the City of Montreal. In other cases, where a large quantity of water is consumed, the difference is felt appreciably. A good civic management should place the rates on a business basis. It may be argued that the city cannot afford to reduce its income by \$500,000. I affirm that, if the city requires more revenue, it should secure it by just, legitimate taxation. A bold, businesslike policy is required at the city hall. I feel that, if the city council should make a move in this direction, this association should assist the movement, and aid particularly in securing the consent of the Provincial Parliament to the amendments that may be needed in the city's charter.

#### GAS PRICES BURDENSOME.

The high price of gas is also another handicap to the manufacturer of Montreal. The Toronto manufacturers secure their gas for 80c, while the Montreal manufacturers are charged \$1 and \$1.20, a difference in favor of Toronto of 25 per cent. for heating purposes and 50 per cent. for lighting. For this difference there is no legitimate reason. I understand the Montreal Gas Co. secures its coal for about the same price as that paid by the Toronto company for its coal, and while the coal used in Toronto is superior to the Canadian coal used in this city, the difference in quality by no means accounts for the great difference in price. The fact that the local company supplies gas for furnace use at a rate of 60c, or one-half of the ordinary charge for lighting, is conclusive proof that the rate of \$1 for factory purposes and \$1.20 for lighting, is extremely high. The city council should, therefore, seriously consider whether or not it should exercise its option to take over the plant at an arbitration value; but I would suggest that if it should decide to do so, it should be clearly understood that it could not be operated under civic man-

agement, but given over to another company, which, I believe, could be done on favorable conditions.

#### CHAIN INDUSTRY IN GERMANY.

**D**URING 1903 there was an increased demand from foreign countries for chains from German factories, enabling them to again employ the hands which had been discharged for lack of work.

Competition by machine-made chains and chains welded by electricity tended to lower the price of forged chains, although the quantity used did not decrease. The trade in crane and ship chains remained about the same during the first half of the year in spite of the labor strike, which lasted nearly three months. During the last half of the year a very noticeable slack set in, which still continues, chiefly because of lack of activity in navigation, so that hardly any orders are received from harbor cities.

As a result of the strike, during which factories in the City of Iserlohn, the principal chain manufacturing centre of Germany, were entirely shut down, foreign competitors received a good share of the orders, and much of the trade thus acquired is still held by them.—C. S. Consul at Solingen, Germany.

#### PERSONAL MENTION.

Mr. Edward Cavanagh, hardware merchant, Montreal, is seriously ill.

Mr. Harry Roper, traveling representative for Alexander Gibb, Montreal, was in Quebec City last week.

James Munro, managing director of the International Automatic Machine Co., and the Munro Wire Works, Limited, New Glasgow, N.S., has been out West reviewing business possibilities out there.

Mr. J. N. Hunter, advertising manager for Lewis Bros. & Co., has returned to Montreal after several weeks' holidays which were spent at his home, Dundas, Ont., and at St. Louis and Chicago.

Last week Miss Elenor McAvity, eldest daughter of Mr. John McAvity, of Messrs. McAvity & Sons, was married to Mr. Wm. Angus, of St. John, N.B., at Lakeside, N.B. The newly married couple spent their honeymoon in Montreal.

All my life long  
I have beheld with most respect the man  
Who knew himself, and knew the ways before him,  
And from among them those considerably.  
And, having chosen, with a steadfast mind  
Pursued his purpose.

—SIR HENRY TAYLOR.



## HARDWARE CONDITIONS IN MANITOBA.



|                                  |           |      |
|----------------------------------|-----------|------|
| Loaded shells:                   |           |      |
| Eley's soft, 12 gauge black..... | 15        | 00   |
| chilled, 12 gauge.....           | 16        | 00   |
| soft, 10 gauge.....              | 18        | 00   |
| chilled, 10 gauge.....           | 19        | 00   |
| Shot, Ordinary, per 100 lb.....  | 6         | 00   |
| Chilled.....                     | 6         | 55   |
| Powder, F.F., keg.....           | 4         | 70   |
| F.F.G.....                       | 5         | 00   |
| Finware, pressed, retinned.....  | 70 and 10 | p.c. |
| plain.....                       | 75 and 2½ | p.c. |
| pieced.....                      |           |      |
| Japanned ware.....               | 37½       | p.c. |
| Enamelled ware, white.....       | 45        | p.c. |
| Famous.....                      | 50 and 10 | p.c. |
| Imperial.....                    | 50 and 10 | p.c. |
| Green Wire Cloth.....            | 1         | 55   |

## PETROLEUM.

|                           |     |    |
|---------------------------|-----|----|
| Water white American..... | 27½ | c  |
| Prime white American..... | 25½ | c  |
| Water white Canadian..... | 25½ | c. |
| Prime white Canadian..... | 24½ | c. |

## SCRAP.

|                             |               |
|-----------------------------|---------------|
| No. 1 cast iron.....        | \$14 to 15    |
| No. 2 ".....                | 7             |
| Wrought iron scrap.....     | 5             |
| Copper (heavy).....         | 8½c. per lb.  |
| Yellow brass (heavy).....   | 7½c. "        |
| Light brass.....            | 5c. to 6c. "  |
| Lead pipe, or tea lead..... | 2c. to 2½c. " |
| Zinc scrap.....             | 1c. "         |

## PAINTS, OILS AND GLASS.

|                                                  |                  |
|--------------------------------------------------|------------------|
| White lead.....                                  | \$5 00 to \$5 50 |
| Putty in bladder, 2½ lb., in keg of 100 lbs..... | 0 02½            |
| Turpentine, pure in barrels.....                 | 0 87             |
| Less than barrel lots.....                       | 0 92             |
| Linseed oil, raw.....                            | 0 55             |
| Boiled.....                                      | 0 58             |

## WINDOW GLASS.

Single 1st break, up to 25 miled inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes.

|                                            |                |
|--------------------------------------------|----------------|
| Lubricating oils, heavy castor machine.... | 0 29           |
| " " extra engine.....                      | 0 27           |
| " " dynamo.....                            | 0 35           |
| " " black.....                             | 0 22           |
| " " cylinder.....                          | \$0 50 to 0 75 |
| (as to quality)                            |                |

|                                  |              |
|----------------------------------|--------------|
| Harness oil.....                 | 0 50 to 0 60 |
| Neatsfoot oil.....               | 1 00         |
| Vegetable oil, 1st pressure..... | 1 00½        |
| " " 2nd pressure.....            | 1 09½        |

## LONDON METAL MARKET.

From The Metal Market Report, August 31, 1904.

**Pig Iron**—Seech warrants Glasgow closed at 51s 9d, there being no change since last week. Middleboro No. 3 foundry closed at 43s, being an advance of 11-2d since last week.

**Tin**—Spot tin opened strong at 7s 6d, futures £124, and after sales of 150 tons of spot and 500 tons of futures closed strong at £123 17s 6d for spot and £124 10s for futures, making price as compared with last issue £1 10s higher for spot and £1 10s higher for futures.

**Copper**—Spot copper opened firm at £57 5s, futures £57 5s, and after sales of 75 tons of spot and 75 tons of futures, closed firm at £57 6s 3d for spot and £57 6s 3d for futures.

**Lead**—The market closed at £11 12s 6d, 1s 3d lower than last week.

**Spelter**—The market closed at £22 16s 3d, making price as compared with last week 3s 9d higher.



## Interest the Boys

**In our \$2.00 and \$2.50  
22 Calibre Rifles**

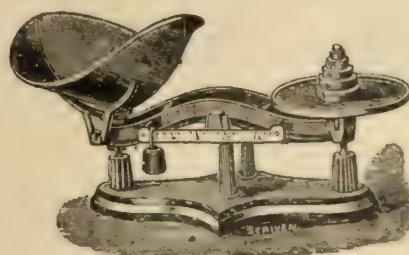
There is a profit in the sale of the rifle, and there is a continuous profit in the sale of ammunition. These rifles are truly marvels at the above prices. Send for circular and price list.

**The HAMILTON RIFLE CO.,**  
Box No. 71. PLYMOUTH, MICH.

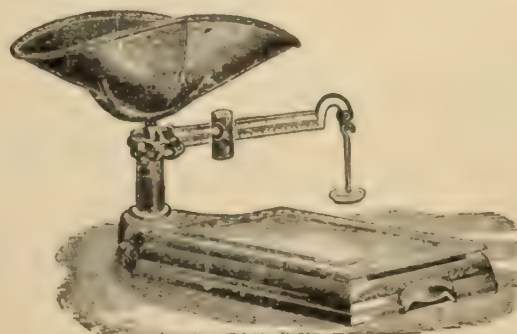
C. H. HENKELS, PHILA.

## THE BURROW, STEWART &amp; MILNE CO.'S

## "CHAMPION JEWEL" SCALES



4 AND 10-LB. EVEN BALANCE.



240-LB. UNION.

The *most popular and generally useful* scales on the market.

*Thoroughly reliable and accurate.*

Made for 27 years in the *largest and best-equipped scale factory* in the Dominion of Canada. Have you seen our latest No. 60 (100 page) Catalogue of *Imperial Standard Scales*?

Write for prices and details

**MERRICK, ANDERSON & CO.,** NORTH-WEST DISTRIBUTORS, WINNIPEG.



## PAINT, OIL AND BRUSH TRADES

### Paint Brushes and Their Care.

(Continued from last issue.)

A brush should never be soaked in water before it is used in paint, for the reason that fat circulates in the capillary tubes of all bristles and hair, and if water is soaked into these tubes the spring and elasticity of the brush is not only destroyed but it speedily becomes very much water-logged.

To swell up a brush which for some cause has become dried out and shrunk on part the bristles so that the end of the handle is exposed, and pour in a small quantity of water, say three or four teaspoonfuls. Then stand it away, bristles up, handle down, for two or three hours and the brush will have returned to its normal condition. If a brush handle gets smeared with paint or varnish, a wire scrub brush dipped in a solution of sal soda will clean off the sticky substance in short order. To test the bristles in a brush, remove some of them and submit them to a smart flame. Bristles, the real animal product, will curl and writhe and emit a peculiar odor. No known adulterant burns this way.

A brush that has been allowed through accident or neglect to get "soggy" may be limbered up nicely by soaking in heated turpentine. Hardened brushes may often be softened into workable condition again by soaking the bristles in hot linseed oil. A simple soaking in turps or benzine will sometimes effect the needed softening up. Brushes, however, that have dried up, saturated with quick drying colors or paint, can at best never be restored to a first-class working condition. The best form of economy, therefore, is to throw such brushes away. Remedies in impressive array have been marshalled wherewith to restore varnish brushes that have become lousy, but the vehicle finisher recognizes no reliable or economical remedy for the purpose named. A dirty varnish brush can be cleaned by washing in oil first, then in turps, and lastly worked in for putting on first rubbing coats, and thus gradually brought back to its original cleanliness. But the varnish brush once lousy, look you! always lousy. Better

"To the fire I now consign thee,  
Peace unto thine ashes be."

When a varnish brush is accidentally dropped on the floor while being used,

pick it up carefully and, holding it at an acute angle, bristles down, pour a small quantity of turpentine over it, thus flooding the accumulated dirt completely off.

There is a considerable diversity of opinion as to the best preserving liquid in which to keep the varnish brushes. Local needs and requirements are probably the safest guides in the matter of choosing preserving liquids for varnish brushes. When the brushes are used daily, as they are in big shops, it is a very good way to keep them in raw linseed oil. Then, every morning before beginning work, the brushes may be rinsed out in turpentine, wiped out

over the edge of the cup, and an elastic brush full of life is assured.

Brushes used daily upon clean surfaces are, or should be, clean, and rinsing in turpentine can do no harm to a clean brush. But in the case of brushes used every two or three days or occasionally, different treatment is needed. Such

brushes are liable to be used upon surfaces and amid surroundings less cleanly than those which obtain in the fine factory or custom shop, and the rinsing in turps, consequent upon preserving them in oil, would merely serve to loosen and set in motion the dirt and flocculent matter gradually collected and forced up into the body of the tools. For this reason it were better to keep them in finishing varnish or, preferably, brush keeping varnish, i. e., varnish minus its driers. Whatever the preservative, the brushes require the most watchful attention. If kept in finishing varnish, the liquid should be changed frequently. So delicate a tool, of which so much is expected, makes imperative the observance of gentle, cleanly treatment. Varnish brushes ought never to be left lying around for and considerable length of time when not in use. Dust is never idle, but always moving and, like the dew of the evening, it falleth upon the just and the unjust, varnish brushes included. Have a stiff, partly-worn brush to clean the handles of varnish brushes; wiping them with cloth distributes lint.



SEE our  
exhibit of



Maple Leaf Varnishes, Enamels.  
Stains, Dry Colors, Paste Colors,  
Hollywood Paint, etc.,

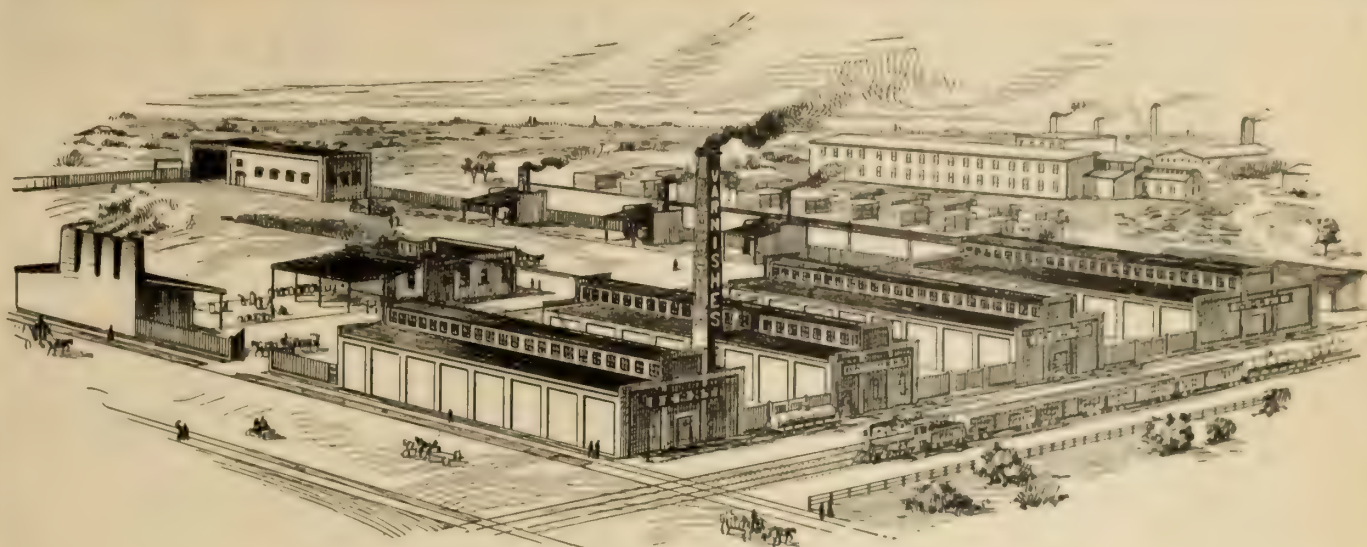
Manufacturers Building, Toronto Exhibition.

**The Imperial Varnish & Color Co.**

LIMITED,

TORONTO, ONTARIO, CANADA.





IT IS NEARLY  
**HALF A CENTURY**

since we commenced to make Varnish. During this period we have acquired a knowledge not only of Varnish, but of the varied needs of varnish consumers that nothing but time can impart, and have also learned how to cater successfully to every varnish want.

Our experience belongs to those who use and sell Berry Brothers' Varnishes.

Safest goods to handle, surest and most reliable goods to use.

WRITE FOR CATALOGUE.

**Berry Brothers**  
LIMITED

WALKERVILLE, ONT.





# Paint and Oil Markets

## Quebec.

Office of HARDWARE AND METAL,  
232 McGill Street.

Montreal, Sept. 2, 1904.

**M**ANUFACTURERS of paint and oil consider that they are well employed at present, as they have all the work necessary to keep them running with full staffs. Trade appears to be quite satisfactory. No recent change has taken place in the ordinary course of business. Prices on the whole are stationary but all staple lines continue strong in the primary market. We quote turpentine one cent in advance of last week's quotations.

**Ground White Lead**—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

**Dry White Lead**—\$4 in casks and in kegs \$4.25.

**Dry White Zinc**—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

**White Zinc (ground in oil)**—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

**Putty**—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

**Orange Mineral**—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

**Red Lead**—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

**Litharge**—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

**Turpentine**—Single barrels, 83 1-2c per gallon; two to four barrels, 82 1-2c.

**Turpentine**—Single barrels, 82 1-2c per gallon; two to four barrels, 81 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

**Linseed Oil**—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

**Shellac Varnish**—Pure white, \$2.80

to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

**Mixed Paints**—\$1.20 to \$1.40 per gallon.

**Castor Oil**—8 3-4 to 9 1-4c in whole-sale lots, and 1-2c additional for small lots.

**Canadian Paris Green**—Barrels 13 1-4c; arsenic kegs 13 1-2c; 50 and 100 lb. drums, 14c; 25-lb. drums, 14 1-4c; 1 lb. packages, 15c; 1-2-lb. packages, 17c;

**English Paris Green**—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

## Ontario.

Office of HARDWARE AND METAL,  
10 Front Street E.

Toronto, Sept. 2, 1904.

**W**HITE lead and linseed oil are the active features on this market this week; mixed paints have also a very good demand. The market for paris green is almost dead. Turpentine on the local market continues quite firm. However, in the South this week there has been a slight decline, but it is thought to be merely a temporary condition, and it is not likely to affect the local market. Linseed oil also continues firm, on account of the high price of seed on the Chicago market. The strike at window and plate glass factories in Belgium is still on, and consequently there is not the usual production being put upon the market. As a result prices in Belgium are rising, and if the local market were more settled there would probably be an advance here. As it is the local market has a firmer feeling. All quotations remain unchanged.

**White Lead**—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

**Red Lead**—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

**White Zinc**—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

**Shingle Stain**—In 5 gallon lots, 60 to 85c per gallon.

**Paris White**—90c to \$1 per 100 lb.

**Whiting**—60 to 65c per 100 lb.; Gilders' whiting, 75c.

**Shellac**—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

**Linseed Oil**—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

**Turpentine**—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

**Glues**—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.: cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

**Putty**—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

**Plaster Paris**—New Brunswick, \$2 per barrel.

**Liquid Paints**—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

**Barn Paints**—55 to 70c per gallon.

**Bridge Paints**—75c to \$1.

**Castor Oil**—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

**English Paris Green**—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

**Canadian Paris Green** (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

## St. John.

There is already a noticeable increase in the consumptive demand for burning



# If You Buy

|           |         |
|-----------|---------|
| Varnishes | Paints  |
| Japans    | Colors  |
| Lacquers  | Glues   |
| Stains    | Bronzes |
| Fillers   | Chamois |
|           | Sponges |

WRITE TO

**R. C. JAMIESON & CO.**

LIMITED

**MONTREAL**

AGENTS FOR ASPINALL'S ENAMEL.



## The Wearing of the Green

depends upon the kind of green used.

Wise painters, looking for brilliancy, covering power, economy and longest wear, prefer

### **LUCAS** **Imperial French Green**

Shrewd dealers always keep it in stock, knowing "the painter who knows," will come back again.

Send for particulars

**JOHN LUCAS & CO.**

PHILADELPHIA

NEW YORK

CHICAGO

McArthur, Corneille &amp; Co., Montreal.

# THE PAINT OF QUALITY


A lasting, bright and serviceable paint. We've made it the standard in Canada with all consumers—either the housekeeper or the contractor. The name

## **Sterling Paints**

stands for the best there is in that line ————— Write for prices.

**CANADIAN OIL COMPANY, Limited**

Front and Scott Sts.,

 **TORONTO.**



# The Canada Paint Company Limited



## "THE CLOTHES OFT PROCLAIM THE MAN."

The colors of the paint with which the house is "clothed" will certainly proclaim the judgment and taste of the owner or painter of the domicile.

If one or two "COATS" of THE CANADA PAINT COMPANY'S Paint are applied the house will be in a class by itself, viz.: the first class.

WRITE FOR CARDS SHOWING THE

Canada Paint  
Company's

—SMART, CLEAR.  
—DURABLE SHADES.

# THE CANADA PAINT COMPANY, LIMITED



oil. Prices are unchanged. Lubricating oils are also unchanged, and only a fair business is reported. In paint oil only a limited demand is reported, though the firmer feeling in linseed oil has tended to more free buying. Turpentine is unchanged. In cod oil rather lower prices rule.

### Window Glass.

MONTREAL.

There is an uncertainty in the glass market, due to the unsettled condition of affairs in the glass centres of Europe. For some time past there has been a strike and lockout in connection with glass manufacturies. The workmen have been given until September 1st to come to the terms of the employers, otherwise every factory in Belgium will be closed. The result is of vital interest to Canadian glass dealers, and the trade are watching the outcome with interest. The prices quoted are merely nominal and we have no assurance that they are strictly followed. We quote: First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70 seventh do., \$5.20, and eighth do., \$5.70. The discount on 50 feet is 20 per cent, and on 100 feet 33 1-3 per cent. There has been no change in prices for diamond star or double thick. First break, 50 feet, \$2.30; second do., \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

TORONTO.

The local market is firm and if the market were more settled there would probably be an advance in prices, caused by the curtailment of supply from Belgium. This is the result of the continuation of the strike at the factories there. We quote: Star first break, at \$3.80 per 100 feet, and Double Diamond, first break, at \$5.06. Discount 15 to 20 per cent. These prices are shaded on large and well assorted specifications.

### Do You Get All You Can?

Mr. Hardwareman, do you get all the paint business you can? Read the suggestions regarding paint trade on the editorial page. An epidemic of house painting would be as valuable to the hardwareman as an outbreak of measles to the doctors.

### Woodstock Varnish Co.'s Reception.

Owing to the fact that the Woodstock Varnish Co., Limited, Woodstock, were unable to obtain space at the National Exhibition at Toronto in time to allow them to make a proper display, they are holding a reception at the Rossin House, rooms 51 and 53, during the two weeks of the exhibition. The company are sending out neat cards of invitation to their customers and others to call and see them at the Rossin House.

### NEW RATCHET BRACE.

The Canada Hardware Co., of Montreal, are placing on the market this week a new ratchet brace that has great strength and is very simple in construction. It is their own patent and is protected in five different countries. It will no doubt have a large sale amongst the trade.

### WHOLESALE HARDWARE ASSOCIATION MEETING.

The annual meeting of the Canadian Wholesale Hardware Association will be held at the Windsor Hotel, Montreal, on September 7th and 8th. A large attendance is expected. The members will be the guests of President F. O. Lewis at a banquet to be held on Wednesday evening at the Canadian Club.

### CALENDARS FOR HUDSON BAY.

THE handsome Calendar issued to the Wall Paper trade by Stauntons Limited, Toronto has found appreciation and wide spread use, as is shown by the following letter:—

Quebec, Aug. 15, 1904.

Messrs. Stauntons Limited,

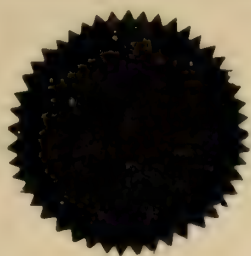
Toronto, Ont.

Gentlemen:—Capt. Bernier, the commander of the "Artic" which will soon sail for Hudson Bay, etc., for 2 or 3 years, asked us to try to procure him a few of your splendid Calendars such as he has seen in our office, and which among numerous qualities has that of lasting until July, 1905. If you have a few more to dispose of in favor of Capt. Bernier we shall be pleased to receive them for him.

Yours Truly,  
SYNDICAT DE QUEBEC.

Normandin & Prance, manufacturers of brushes, Montreal, have dissolved partnership and registered under style of Normandin, Prance & Co.





## THE STAMP OF RELIABILITY

is found on every can, keg and barrel sent out by us—everything bearing the name of the Standard Paint and Varnish Co., of Windsor.

### DECORATIVE ENAMEL

A genuine enamel, imparting a hard, lustrous, non-absorbent surface that always remains bright and attractive. Adapted for woodwork, furniture, and earthen and metal ware of all kinds. 20 colors and tints, gals.,  $\frac{1}{2}$  gals., and tins (4 sizes).

SEND FOR CIRCULAR AND PRICE LIST.

# STANDARD PAINT & VARNISH CO., LIMITED, Windsor, Ont.

R. E. THORNE, 768 Craig St., Montreal

WHOLESALE AGENT AND IMPORTER.

### BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street



WE WANT YOU  
TO TRY

### SOLARINE

SHALL WE SEND YOU  
SAMPLE ORDER?

MONEY BACK

"SOLARINE" POLISHES

60 George St., Toronto, Ont.

## Linseed Oil

To-day's price in London is £18 1s od. I offer 50 barrels, raw, at £17 15s od, c.i.f. Montreal, which price with duty is less than 41c. per gallon. Also 50 barrels refined at £19 5s od, c.i.f. Montreal.

J. W. L.,

P.O. Box 1157,  
Montreal

## McCaskill, Dougall & Co.

Manufacturers



RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES.

MONTREAL.

## GLUES

of every kind, and for every purpose. Our glues enjoy large sales in almost all countries of the world, and our brands are generally to be seen amongst good stocks of glues. We believe we are giving better value than any other manufacturer, and we want to submit our lines to the Canadian test. Samples gladly sent in reply to enquiries.

GROVE CHEMICAL CO. Ltd., Appley Bridge, Lancashire, Eng.

TRADE



MARK

## Nobles & Hoare.

CORNWALL ROAD STAMFORD STREET.

LONDON, ENG.

Manufacturers of

HIGH-CLASS VARNISHES ONLY

Which can be obtained direct from the works or from the principal Color Dealers in Canada



## We Don't Ask Much.

We only ask for a trial order and we are satisfied that *you will ask us* for the second. "Island City" paints make their own way. Sterling quality is the secret.

P. D. DODS & CO., Montreal, Toronto, Vancouver







a job is completed too late in the season to be tested in severe weather and the owner is unwilling to have the final payment construed to mean a final acceptance of the work, the contractor, if responsible, can generally secure a prompt settlement by giving the owner a written extension of the guarantee over another winter, allowing ample time for a thorough trial of the apparatus.

The custom of allowing a portion of the contract price to remain unpaid until the apparatus has been tested in zero weather is becoming less common among responsible contractors.

In heating contracts for schools, churches or public buildings a bond for the successful completion of the work is often required.

#### The Welding of Aluminum.

At a meeting of the Faraday Society, London, a paper written by S. O. Cowper-Coles stated as follows:

Soldered aluminum joints have proven unsatisfactory, as they will not stand the test of time, because galvanic action takes place between the aluminum and

solder. One of the chief difficulties encountered in soldering aluminum other than the formation of oxide, is that a few degrees below its welding point it passes into a pasty or brittle state, and, being a very good conductor of heat, the solder very rapidly cools and freezes before it has time to flow sufficiently. He then proceeded to describe Dick's machine for welding aluminum, by the removal of the oxide mechanically, combined with pressure. Reference was also made to Heraeu's process of welding aluminum, which consists in heating the aluminum in a reducing atmosphere until it reaches the pasty stage, when the joint is made by kneading and hammering. Emme's process which is somewhat similar, consists in heating the aluminum up to 600 degrees C., and welding by hammering. The electric welding of aluminum has not proved commercially successful.—Stoves and Hardware Reporter.

When the advertiser has that sort of confidence in his proposition that leads him to spend money wisely and liberally to set it before the public, his confidence is morally certain to beget confidence in his readers.—Printers' Ink.

#### WHAT IS ORIGINALITY.

"The art of saying better what has been said, or doing better what has been done," is given as a definition of originality.

#### A NEW FACTORY.

THE new factory of the Alabastine Co., Paris, Ont., to replace that destroyed by fire in April, is completed and a part of the machinery installed. The building is two and three stories high and has a front of 80 ft. by a depth of 104 ft. The new office near the factory building is two stories high with basement, and is 24 ft. wide by a depth of 32 ft., the work on which is not yet completed.

Mr. O. F. Powell, the manager of the company, is in Toronto this week, and to Hardware and Metal said that the difficulty of replacing the dam in the Grand River, which was washed away by the Spring freshets, has much retarded manufacturing industries located on the river banks. After the freshet 12,000 bags of sand and three huge cribs of timber filled with stone were placed in position, but the heavy rains of the Summer have washed this away, and the condition is almost as bad as it was in the Spring. However, the work of repairing the dam is being carried on briskly.

## Grand Idea Range

THE RANGE THAT NEVER FAILS.

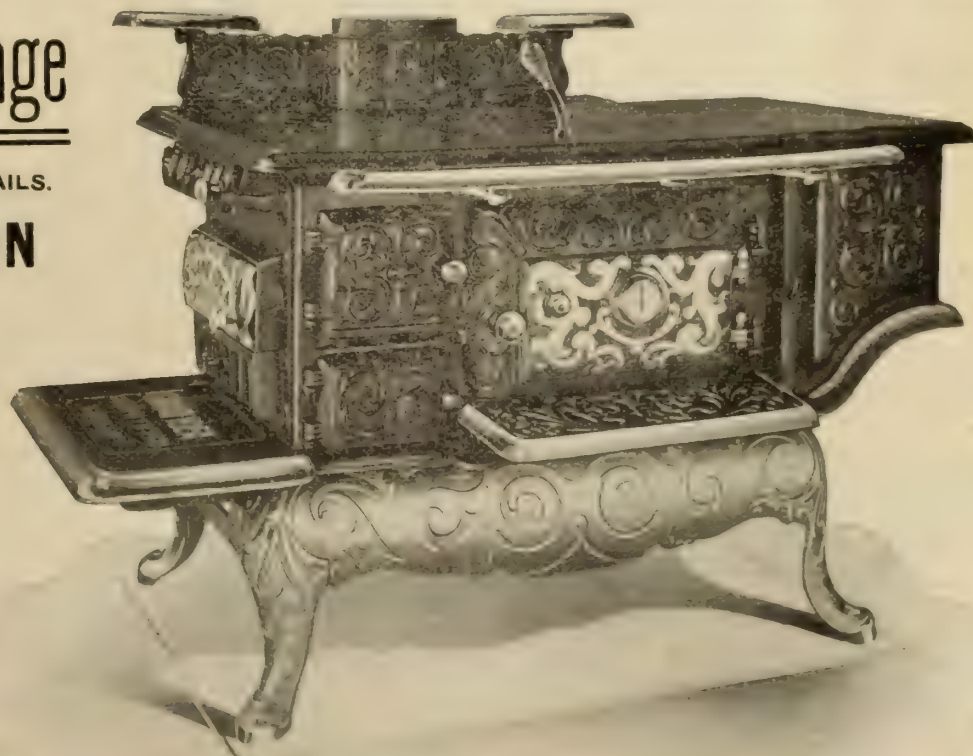
### ON EXHIBITION

AT

### Toronto Exposition

OF THE GREATEST INTEREST  
TO STOVE DEALERS.

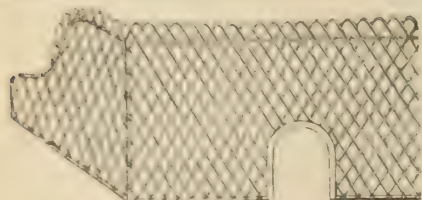
COME TO TORONTO EXPOSITION and visit us in the Transportation Building. We will be glad to see you and will be pleased to show you our full line of Ranges, Stoves, Heaters, Warm Air Furnaces and Hot Water Boilers. You can leave your grips and parcels with us during your stay on the grounds. Meet your friends at the exhibit of the



GUELPH FOUNDRY CO., Limited, GUELPH, ONT.



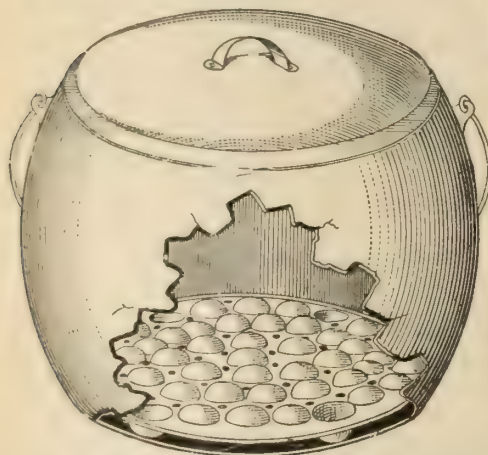
**WORK AND  
PRICES  
RIGHT  
GALVANIZING** **ONT.**  
**ENGINE & PUMP CO.,**  
**TORONTO, ONT. LIMITED.**



We make all styles of  
**WIRE AND METAL RAILINGS,  
WINDOW GUARDS, ETC.**

Send for New Catalogue, No. 8.

**DENNIS WIRE & IRON CO.,**  
LONDON, ONT.



**The Standard Vituals and Boiler Protector**

Manufactured of tin. No burning of vituals. No burning of boilers. No boilers to burn. Boilers last four times as long. Food cooks in three fourths of the time.

**QUICK SELLER**

No. 1 size 6½ in. No. 2 size 7½ in. No. 3 size 8½ in.  
No. 4 size 9 in.

For sale by

**E. T. WRIGHT & CO., Hamilton, Canada.**

**MODERN MAGIC!**



No more matches required to light the gas.  
The "IGNITO" Mantle Lights when the gas is turned on.  
Write for booklet and samples.

**The International Gas Appliance Co., Limited**  
146 BAY STREET, TORONTO, Canada

**CANADIAN TRADE ENQUIRIES.**

The names of the firms making these enquiries, can be had from the Department of Trade and Commerce, Ottawa. Persons desiring the addresses, should be sure to mention the number of the enquiry and the department from which the enquiry came.

FROM HIGH COMMISSIONER FOR CANADA.

127. A London manufacturer of paper bags and wrappings is looking out for a reliable firm in Canada willing to take up his agency.

128. A firm buying large quantities of mica (ambered, smooth), are seeking supplies from Canada.

FROM IMPERIAL INSTITUTE.

82. A London firm wishes to inaugurate business in Canada in certain specialties in labor saving machinery, including lime, whitewashing and painting machines, largely used in Europe. The firm is prepared to appoint a suitable resident agent.

84. A firm in Manchester wishes to be placed in touch with firms in Canada who are prepared to take up agencies for the introduction of humidifying, heating, ventilating, air conveying and elevating machinery, dust collecting and drying plants and similar apparatus.

85. A Glasgow firm of merchants claiming good connection is willing to act as selling agents for Canadian manufacturers of goods in the engineering, iron, steel, machinery and allied trades, and would also act as buying agents.

FROM COM AGT. AT BIRMINGHAM

63. A firm in Great Britain holding the patents and manufacturing rights of a suction gas plant, is open to make arrangements in Canada for manufacturing and selling rights.

64. A firm of high-class bedstead manufacturers in the Midlands wishes to appoint an agent in Canada for the sale of their goods.

65. A firm in Great Britain wishes to find a market in Canada for their milling machinery; would appoint an agent.

66. A firm in the Midlands wishes to appoint an agent in Canada for the sale of their enamelware wash bowls, tea pots, etc.

67. A large firm wishes to get in touch with the manufacturers of D shovel handles. Can take them in very large quantities.

68. A firm in the Midlands wishes to place their pins and needles on the Canadian market.

72. A firm in the Midlands is in a position to handle large quantities of potash direct from Canada.

76. A British firm wishes to place their boot blackening on the Canadian market. The same firm also wishes to purchase low grade graphite for stove polish.

Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

**NEWMAN'S PATENT  
INVINCIBLE FLOOR SPRINGS**

Combine all the qualities desirable in a Door Closer. They work silently and effectually, and never get out of order. In use in many of the public buildings throughout Great Britain and the Colonies.

MADE SOLELY BY  
**W. NEWMAN & SONS, Birmingham.**

**Buy the Best.**

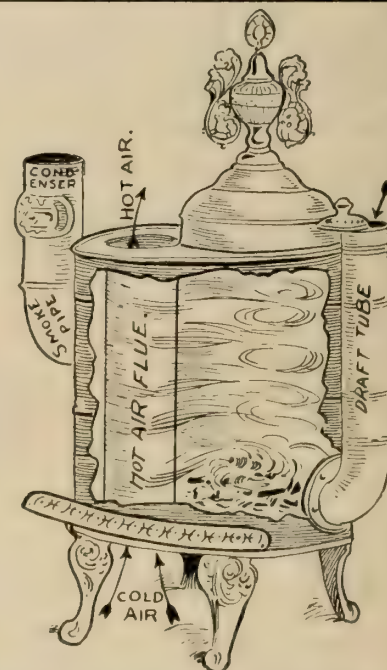


**HERCULES**

**Sash Cord.**

**Star Brand Cotton Rope  
Star Brand Cotton Clothes Lines  
Star Brand Cotton Twine**

For Sale by all Wholesale Dealers.



**OUR EXHIBIT at TORONTO,  
LONDON and OTTAWA**

Fairs should be studied by every stove dealer. These Stoves of ours are on new lines, are powerful heaters, and comparatively low-priced. No other Stoves like them. SEE THEM SURE.

**TELEPHONE CITY STOVES**  
BRANTFORD, Ont. LIMITED



# THE "GOOD CHEER"

## Art Base Burner

We are again preparing for another big run on this stove, but the demand has exceeded the supply every season so far, so order in good time, and if you have not yet seen this stove get a sample NOW, then follow up quick with your order, and we will see that you get them promptly.



There is nothing  
"just as good"  
made yet  
—nor likely to be.

IT HAS  
**NO  
FAULTS**

Firepot removable  
without turning a  
single bolt.

Has Duplex Grate  
and large ash pan.

Every stove a  
Double Heater.

Has Steel Oven.

With or without  
oven.

**The JAMES STEWART MFG. CO., Limited**  
Woodstock, Ont. and Winnipeg, Man.



# HEATING AND PLUMBING

## THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

### OFFICERS.

President—Robt. Ross, Toronto.  
Vice-President—A. J. Hammond, Winnipeg.  
Secretary—J. G. Gordon, Montreal.  
Treasurer—F. G. Johnson, Ottawa.

### PROVINCIAL VICE-PRESIDENTS.

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Nova Scotia—J. Kinsman, Halifax.  
New Brunswick—W. Watson, Moncton.  
Manitoba—A. J. Hammond, Winnipeg.  
British Columbia—J. McKinlay, Ottawa.

## ONTARIO PROVINCIAL ASSOCIATION.

### OFFICERS.

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Vice-President—W. J. Walsh, Hamilton.  
Financial Secretary—Lewis LeGrow, Toronto.  
Treasurer—J. K. Wilson, Toronto.  
Secretary—W. H. Meredith, Toronto.  
Executive Committee—The officers and H. Mahoney, Guelph; S. Mellon, Hamilton, and E. H. Russell, London.

### MONTREAL.

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Secretary—J. Gordon.

### TORONTO.

President—Robert Ross.  
Vice-President—Geo. H. Cooper.  
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### HAMILTON.

President—S. Mellon.  
Secretary—T. H. Davies.

### OTTAWA.

President—G. L. Julien.  
Secretary—J. Thorpe Blyth.

### LONDON.

President—B. Noble.  
Vice-President—Wm. Smith.  
Secretary-Treasurer—E. H. Russell.

## THE PLUMBING SUPPLIES MARKET.

### Quebec.

Office of HARDWARE AND METAL,  
232 McGill Street,  
Montreal, Sept. 1, 1904.

VERY little cool weather at this season has made a big difference to the demand for heating and plumbing supplies. Within the past week noticeable change for the better has taken place in these lines, which were already brisk. Travelers are now

all on the road and are sending in larger orders and more of them than formerly, so that business throughout is in a splendid condition.

**Range Boilers**—The heating season has commenced in earnest within the past week. A few cool days going towards creating a big demand for range boilers. We quote as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

**Lead Pipe**—Lead pipe remains unchanged, there is still a brisk demand, while prices are firm at former quotations. The price is 8c for composition, waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

**Soil Pipe and Fittings**—These are unusually active with no change whatever in prices. We quote: Light soil pipe, 3 to 6 inches, 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

**Iron Pipe and Fittings**—Concessions are still obtainable on the quoted prices of iron pipe and fittings. The advent of the heating season has created even a better demand than formerly for these goods. We quote nominal prices as follows: Standard pipe, per 100 feet, in length under 19 ft. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1-1/4 in., \$7.35; 1-1/2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1-1/4 in., \$10.05; 1-1/2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4, and 3-8 in black and 1-4 and 3-8 in galvanized is 12 1/2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55;

1-1/4 in., \$10.55; 1-1/2 in., \$12.75; 2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1-1/4 in., \$13.25; 1-1/2 in., \$16; 2 in., \$21.90.

The discount on all sizes of extra heavy pipe is 12 1/2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

**Solder**—There is no noted change in the price of solder this week. Bar solder is quoted at 17 1/2c, and wire at 18c.

**Soldering Irons**—Prices are as follows: 1 to 11-2 lbs., per lb, 37c; 2 lbs and over, 34c.

### Ontario.

Office of HARDWARE AND METAL,  
10 Front Street East,  
Toronto, Sept. 2, 1904.

THERE is very little change on the local market. Things are still rather quiet, but it is hoped that the market will exhibit a more lively feeling in the near future. There is no change to be noted in the price list.

**Lead Pipe**—There is a fair business being done in this line, although the slackness of the general market is felt to some extent. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

**Soil Pipe and Fittings**—There is a quiet feeling on the market in unison with the general market. Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

**Iron Pipe and Fittings**—A very fair business is being done, considering the general quiet feeling on the market. Prices remain as quoted last week. We quote nominally: Malleable fittings, 33 1/3 to 35 per cent.; cast iron (standard), 57 1/2 to 60 per cent.; headers, 52 1/2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1/2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1/2 to 70 per cent.

**Copper Range Boilers**—A fairly good trade is being done, affected to some ex-



## A STUDY IN BLACK



Did you ever try to interest your farmer customers or any other customers in black?

Do you know that black—the right black—makes the most serviceable paint and best preservative for a roof, whether metal or wood?

**RAMSAY'S RUBBER ROOFING** is the right black made for roofs, containing the elastic and wonderful preserving qualities of rubber.

Sell Ramsay's rubber roofing at \$1.00 per gallon, nicely put up in gallon cans, and see what a good profit it leaves you.

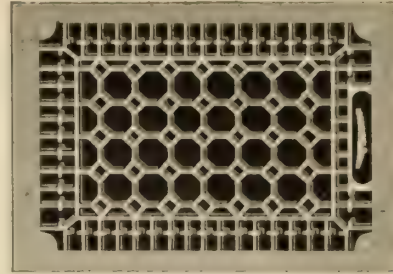
Suggest it to your customers for Autumn painting.

**A. RAMSAY & SON**  
MONTREAL

EST'D  
1842

PAINT  
MAKERS

## "REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER

**THE FERROSTEEL COMPANY,**  
BRIDGEBURG, ONT. and CLEVELAND, OHIO,

OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.

## We're Busy. Are You?

We find it hard work keeping up with orders for the

## Imperial Oxford Range

That means that merchants who are handling the Imperial Oxford are busy too. If you are still dubbing along selling a few ordinary stoves you would probably like to hear something about the range that keeps merchants busy.

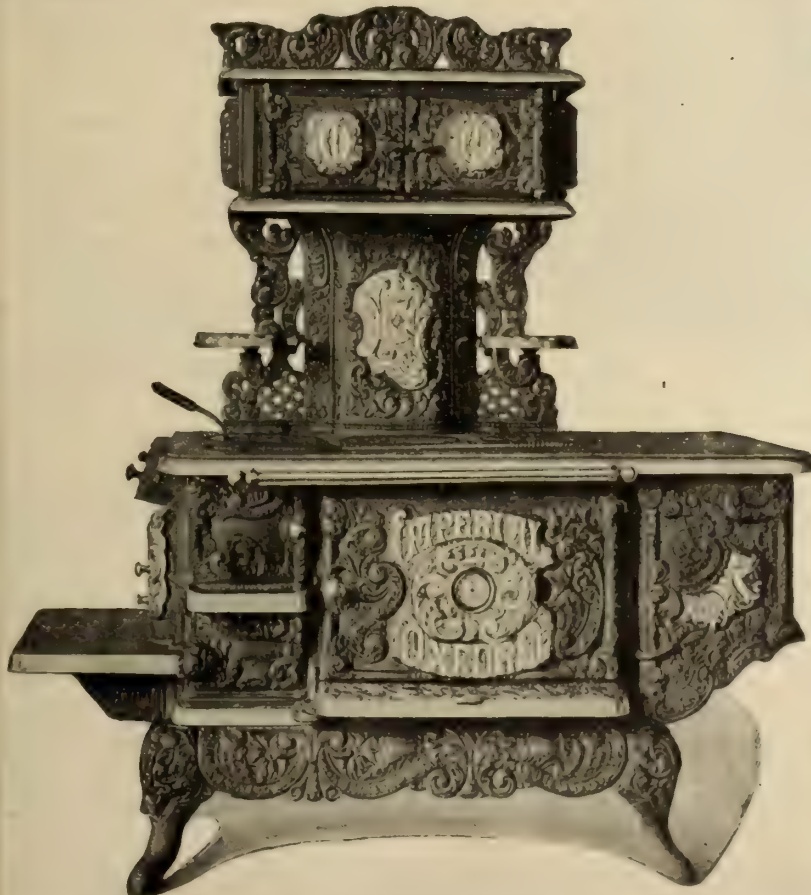
WRITE US AND WE'LL TELL YOU ALL ABOUT IT.

**The Gurney Foundry Co., Limited,**  
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:

**THE GURNEY-MASSEY CO., LIMITED,**  
MONTREAL, QUE.

**THE GURNEY STANDARD METAL CO., Limited**  
CALGARY, ALTA.





lent by the general slackness prevailing. Discounts at 15 per cent. continue on the new prices issued some time ago.

**Iron Pipe**—Competition in this line has not been quite so keen during the last three or four weeks. Business is somewhat quiet, but dealers look for it to pick up soon. Prices are quoted unchanged since last issue. We quote f. o. b. Toronto as follows: Black pipe, 1-8 in., \$1.85 to \$1.95; 1-4 in., \$1.90 to \$2.05; 3-8 in., \$2 to \$2.25; 1-2 in., \$2.25 to \$2.35; 3-4 in., \$2.85 to \$3; 1 in., \$4 to \$4.25; 1 1-4 in., \$5.75 to \$6; 1 1-2 in., \$7 to \$7.25; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.65 to \$2.80; 3-8 in., \$2.80 to \$3; 1-2 in., \$3.15 to \$3.25; 3-4 in., \$4 to \$4.10; 1 in., \$5.90 to \$6; 1 1-4 in., \$8.25 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

**Enamelled Ware**—Prices are firm, and a fairly active trade is being done. We quote: "Standard," 51-2 feet, 21-2 in. rolled rim, first quality, at \$21.60; second quality \$16.35.

with French plate mirrors, secured on the edges with brass molding. On the sides are two specially designed daylight show cases and in front is a railing of polished brass. The booth is lighted by a large electric sign and by cluster electric lights mounted on handsome newel posts. The goods which the company manufactures are tastefully arranged on the pyramid and in the show cases. In the foreground are chairs, desks and settees for the use of visitors. On the whole, the large canopied space affords a roominess and an opportunity for rest which would be impossible in an enclosed booth.

The goods displayed are used by plumbers from the making of the service tap to the completed job of plumbing.

Besides the display of plumbers' brass goods the company also has, in the same booth, an exhibit of water works and gas works goods. Although the plumber is not directly concerned in these goods, yet he is interested to the extent of their being used in kindred

The exhibit is in charge of Mr. Oscar B. Mueller, treasurer of the H. Mueller Mfg. Co., who will be pleased to show and explain the uses of the goods to visitors.

### Heating Surface Required.

A RULE to estimate the amount of heating surface necessary to maintain the heat of the air of enclosed space in buildings at the desired temperature, is given by W. J. Baldwin in his book on "Heating," that is well worth remembering. The old method of taking the contents of a room or building and dividing it by some fixed factor to find the heating surface is now entirely obsolete, although it should be, as it was not based on anything but the most arbitrary principles.

It may be resorted to now in a rough way when making preliminary estimates of cost, the price per cubic foot being known approximately by comparison with other buildings whose cost is known.

When it is considered, however, that a room of 1,000 cubic feet may be a cube of 10x10x10 with one cold side in one case, while with three cold sides in another, it is quite evident that it will require nearly three times as much heating surface in one case as in the other, so that this alone shows the error of estimating heating surface by cubic contents.

The heating surface necessary to warm a room, of course, should be proportional to the cooling surface, and the glass of the windows and the outside walls form the largest factors in cooling.

The glass which forms the windows forms the highest cooling factor in ordinary practice, and it may be taken at 1,000, in which case the following table shows approximately the value of other building materials:

|                                                          |                |
|----------------------------------------------------------|----------------|
| Window glass .....                                       | 1,000          |
| Oak and walnut sheathing on walls ..66 to 100            |                |
| White pine and pitch pine .....                          | 80 to 100      |
| Lath and plaster, walls good .....                       | 75 to 100      |
| "            "            common .....                   | 100 to 150     |
| Common brick (rough) .....                               | 150            |
| "            "            (hard finish) .....            | 200            |
| "            "            (hollow walls, hard finish) .. | 150            |
| Sheet iron .....                                         | 1,100 to 1,200 |

A square foot of glass and a square yard of ordinary outside wall have about the same cooling value.

It has been found that one square foot of heating surface with steam at one pound pressure will just about offset the cooling done by two square feet of glass, when the outside temperature is 70 de-



H. Mueller Mfg. Co. Display at St. Louis.

### A Plumbing Display at St. Louis.

A DISPLAY that has interested plumbers from all parts of Canada and the United States is the "Mueller Exhibit" at the St. Louis Exposition, a fairly good view of which is shown in the accompanying cut. The display is unusually attractive. The furnishings are not gaudy, but they are expensive and elegant throughout. The woods are finished a dull Antwerp and the upholsterings are all Spanish leather. The background of the booth is formed by a massive wall of black velvet and the large pyramid in the centre is faced

trades, and an opportunity to inspect a high-class exhibit of them is one which he should not fail to take advantage of.

The Mueller exhibit is located in the Palace of Manufacturers, the first large building to the left of the Lindell, or Wabash, entrance to the Fair. E street is the first through street one encounters after passing in at this entrance, and the exhibit is just a short distance down E street, between 4th and 5th streets. If the visitor will look for the large electric sign and trade mark shown in the illustration the exhibit will be easily found.

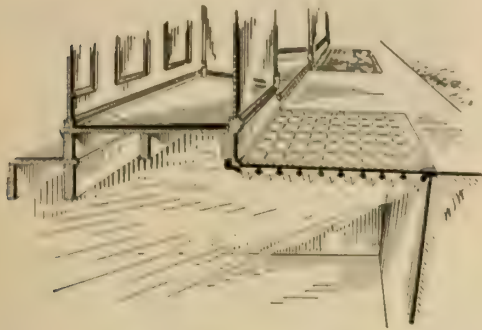


## STORE ALTERATIONS

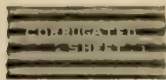
Now is the time—do not leave until winter months. Send for information and

**BEST METHOD  
of LIGHTING  
STORES,  
BASEMENTS,  
CELLARS.**

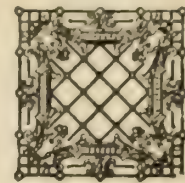
**LUXFER PRISM CO., Limited,  
100 King St. West,  
TORONTO.**



CEILING PLATE, No. 560



SAFE LOCK SHINGLE



CEILING PLATE, No. 557

WE HAVE A COMPLETE LINE OF

## METAL BUILDING GOODS

With which any dealer can build up a lucrative business. Our travellers work with the trade and help them to close orders, and we try and make each transaction a stepping-stone to further business.

We are adding new Ceiling Goods and a line of Water Bowls and Stanchions for Cattle Barns, which will be a profitable line for the trade in agricultural districts.

**The Metal Shingle & Siding Co.,  
Preston, Ont. LIMITED**

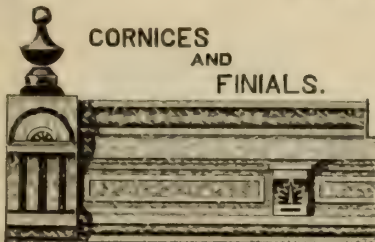
Western Agency:  
ELLIS & GROGAN, CALGARY.

Manitoba Agency:  
CLARE & BROCKEST, WINNIPEG.

Montreal Agency:  
J. B. DAGENAIS, 956 St. James St.



ELBOWS



CORNICES  
AND  
FINIALS.



WINDOW & DOOR CAPS.



PRESSED BRICK.

## Visit our Booth

at the Exposition and see the best in plumbing equipment, bathroom supplies, valves, brass and steam fittings and gas and electric light fixtures

### See the Special Display

of the Nethery Patent Flush Valve—the valve that dispenses with the tank on closet outfits.

**JAS. MORRISON BRASS MFG. CO., LIMITED  
TORONTO, ONT.**





gress. This is so well established now that it need not be questioned.

In the early days of steam heating the writer of "Heating" was acquainted with this fact, and he devised the following rule:

"Divide the difference in temperature, between that of which the room is to be kept and the coldest outside atmosphere, by the difference between the temperature of the steam pipes and that at which you wish to keep the room, and the product will be the square feet, or fraction thereof of plate or pipe surface to each square foot of glass (or its equivalent in wall surface)."

Thus: temperature of room, 70 degrees; less temperature outside, 0; difference, 70 degrees. Again: temperature of steam pipe, 212 degrees; less temperature of room, 70 degrees; difference, 142 degrees. Thus:  $142 \div 70 = 0.49$ , or about one-half a square foot of heating surface to each square foot of glass or its equivalent.

It must be distinctly understood that the extent of heating surface found in this way offsets only the windows and other cooling surfaces it is figured against; and does not provide for cold air admitted around loose windows, or between the boarding of poorly constructed wooden houses or for ventilation. These latter conditions, when they exist, must be provided for separately, and usually require as much as 50 per cent. additional; a good common rule for ordinary purposes being three-fourths of a square foot of heating surface to each square foot of glass, or its equivalent in wall surface.

In isolated buildings, exposed to prevailing north or west winds, there should be a generous addition of the heating surface on the exposed sides of the rooms.

In greenhouses the saving of heat when double glazed sashes are used is very apparent, and in buildings warmed altogether by direct radiation 1-5 to 1-4 less heating surface will do when double windows are used.

#### Plans for Hardware Store.

Editor of Hardware and Metal:

Can you give me any information as to where I can get plans of the interior of a good up-to-date hardware store. I am building a new store, and would like some advice in regard to the interior arrangement, believing that you give your subscribers help in this way.

O. B. MANVILLE.

Prince Albert, Sask.

#### Plumbing Strike Failed.

ON the first of May last the steamfitters and plumbers of Montreal went out on strike, matters being at a deadlock between them and the master plumbers. The latter decided to fight the matter to a finish. Within a few weeks' time they hardly realized that there was a strike as they had secured all the men necessary, from outside sources. Thus while there was nominally a strike in progress the master plumbers gave it little concern. Matters continued in this manner throughout the Summer, until Tuesday of this week, when at a meeting of the Plumbers and Steamfitters' Union, held at St. Joseph's Hall, it was resolved to suspend the strike. The men have at last realized the hopelessness of their position. They were getting 25 cents an hour working nine hours a day and demanded 35 cents and an eight hour day. It is expected that this will end any labor trouble in plumbing circles in Montreal for some time to come.

#### Steam Heating in West.

R. J. McConnell, hardware merchant, has the contract of putting a large steam heating plant in the Starkey House. This is the first of its kind introduced in Carman. The material is on hand and installation will begin in a few days.—Carman Leader.

#### Building Notes.

A new parsonage is being erected in Fenwick, Ont.

A new high school building is to be erected in Midland, Ont.

Wm. Greer is building a frame block on his property in Brandon, Man.

Tenders are being called for the erection of an armory at Burford, Ont.

John Hadden is erecting a new residence on Victoria street, Port Arthur.

I. Lawrence, will erect a residence on corner of Clark and Wellington streets, Winnipeg.

The building of the new Presbyterian church at Fort Frances, Rainy River District, has commenced.

The new fire hall in Toronto will probably be located on the corner of Simcoe and Wellington streets.

A three-storey brick building is being erected on Coromant street, Victoria, B.C., for Wah Yune & Co.

J. H. McGregor, Victoria, B.C., is erecting a three-storey block on Langley street. W. J. Smith is the contractor.

The new factory of the Petrie Mfg. Co., manufacturers of cream separators, at Hamilton, is now nearly completed.

The First Baptist Church of Vancouver, B.C., is going to build a new church on Burrard and Nelson streets.

#### Building Permits.

##### TORONTO.

W. Leidy, dwelling near Queen on Pape avenue, \$1,250.

Alex. B. Elder, factory corner Logan and Eastern avenue, \$1,200.

G. Berner, brick dwelling near Harrison on Shaw street, \$2,500.

Charles Dennis, brick dwelling, No. 117 Macdonell avenue, \$2,300.

Parmenas Morris, dwellings Nos. 42 and 44 Florence street, \$2,200.

Wesley Bulmer, brick dwellings near Dundas on Birtle avenue, \$2,000.

H. E. Jarman, dwellings near College on Lansdowne avenue, \$2,200.

George Pepper, 1 pair brick dwellings, Nos. 264 and 266 Huron street, \$2,000.

Priscilla Barton, stone and brick dwelling near Sussex on Robert street, \$5,000.

Firstbrook Box Co., addition to factory corner King and Ontario streets, \$13,000.

Charles Plowman, brick and stone dwellings, Nos. 60 and 62, Roxborough street west, \$6,000.

Jas. A. Aberdeen, brick dwellings, south-east corner of Markham and Herriek streets, \$16,000.

Clarkson Jones, three attached five-storey brick warehouses, near Bay on Front street west, \$72,000.

Geo. Goulding & Sons, four-storey warehouse, brick and concrete, near Bay on Wellington street, \$35,000.

##### MONTREAL.

Alf. Foidy, Huntley street, one dwelling, \$1,000.

F. Taylor, Sanguinet street, one dwelling, \$1,400.

Mrs. Archambault, St. Hubert street, one dwelling, \$1,800.

Ettienne Robert, Montgomery street, two dwellings, \$4,000.

F. Sutherland, St. Ames street, one store and factory, \$25,000.

The H. R. Ives Co., Queen street, alterations on one building, \$1,000.

Canadian Brewing Co., St. Dominique street, one cold storage warehouse, \$8,000.

Nap. Richard, Notre Dame and Deseny street, alterations on dwelling, \$1,567.



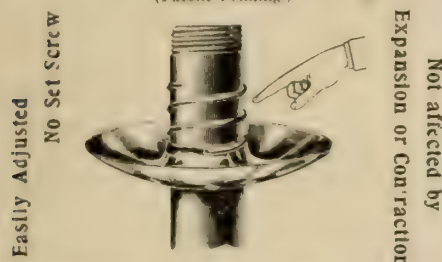
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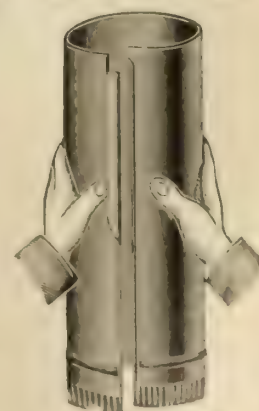
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# INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

THE Simplex Railway Appliance Co. have announced their intention of erecting immediately a plant in Montreal to employ 1,000 men. The plant is intended for the manufacture of railway cars. It will cost \$2,000,000.

It is reported that two well defined iron ore deposits have been discovered in McTavish Township, New Ontario. One bed is 20 feet deep, the other from 20 to 40 feet. The hematite is from 5 to 60 per cent. iron, low in phosphorus and high in lime, and the better grade is of bessemer quality. The beds are but five miles distant from Lake Superior and should afford Canadian furnaces a good supply of hematite.

Pursuant to Judge Idington's decision, the directors of the Cramp Steel Co. have formally elected the following officers: Major Currie, president; Duncan Donald, secretary, and M. J. Lindsay, a director. Recently an attempt was made through the courts to dissolve the company's new organization on the ground that the by-laws had been violated when five directors were elected, the original charter only providing for three. Judge Idington held that if three directors were properly elected the board would be properly constituted. As a result of litigation work in the company's plants at Collingwood has been delayed somewhat, but with the difficulty settled rapid progress will begin at once.

B. H. Folger, Kingston, one of the best known mining men in Ontario, said in an interview: "It is my firm belief that in time the iron mines on the Canadian side of Lake Superior will be quite as important as those on the United States side. So far there has been practically nothing done on the Canadian side except prospecting, but enough has been shown to demonstrate that the iron is there, and that all it needs is developing. The discoveries on Hunter's Island admit of no question as to their merit. The new discovery is 100 miles from that district and the outcroppings are part and parcel of the same range. There are outcroppings along that whole distance, and in time there will be mines. It will be found,

too, that the Canadian ore will be of just as good grade as that found in the famous Minnesota ranges."

## NOTES.

The mill plant and property of the Vancouver Lumber Co., Vancouver, B. C., has been sold to Texan capitalists.

The new blast furnace, just completed, of the Nova Scotia Steel & Coal Co., has been blown in.

The newly organized Canada Car Co. propose to erect a large plant on the outskirts of Montreal.

The discovery of large deposits of tin-bearing ore in eastern Manitoba is announced by D. H. Urquhart and A. McCall, Rat Portage.

The saw mill and planing mill and a large amount of lumber belonging to Wm. Mustard, Bayfield, Ont., have been destroyed by fire. There is no insurance.

An extensive body of zinc ore in the vicinity of Quatsino Sound, B. C., is said to be attracting the attention of United States capital, and several representatives have been looking over the property.

## COMPANIES INCORPORATED.

The Hamilton Silicate Brick Co., Limited, Hamilton; capital, \$40,000; purpose, to manufacture and deal in all kinds of brick, stone, plaster, and other material and artificial building material.

The St. Louis Auto Club, Limited, Lachine, Que.; capital, \$20,000; purpose, to erect club houses near Lachine. The directors are: Z. E. Martin, A. Aumond, W. J. Wilson, S. G. Bergeron, E. Pelissier, all of Montreal.

Cockburn & Rea, Limited, Toronto; capital, \$50,000; purpose, to manufacture and deal in dry goods, millinery, mantles and other like goods. The directors are: W. A. Cockburn, T. W. Rea and C. A. Cockburn, all of Toronto.

Hillcoat Bearing Co., Limited, Amherst, N. S.; capital, \$20,000; purpose, to manufacture and deal in ball and roller bearings. The directors are: H. V. Hillcoat, F. L. Blair, A. J. Crease, H. A. Hillcoat and J. W. Taylor, all of Amherst.

The Montreal Smallwares Co., Limited, Montreal; capital, \$100,000; purpose, to manufacture and deal in smallwares.

The directors are: G. A. Diggs, W. R. Willetts, Waterbury, Conn.; H. Beaudry, J. Beaudry and C. Dessarilles, all of Montreal.

The Tiger Metal Co., Limited, Montreal; capital, \$20,000; purpose, to manufacture and deal in chemicals, metals, paints and oils, etc. The directors are: W. Jack, W. F. B. Henry, W. R. Allen, T. Crawford and P. A. Altimas, all of Montreal.

Canada Car Co., Limited, Montreal; capital, \$3,000,000; purpose, to manufacture railway cars, passenger, freight and street cars. The directors are: P. Davidson, P. M. Robertson, A. Wainwright, T. Davidson, all of Montreal; A. H. Larkin, New York.

The Breckon Fire Escape Co., Limited, Toronto; capital, \$40,000; purpose, to manufacture and sell fire escapes, elevators, and all kinds of structural iron work and iron fencing. The directors are: J. A. Breckon, Geo. Crompton, and J. F. Hayes, all of Toronto.

The Anglo-Canadian Cold Storage Exchange, Limited, Toronto; capital, \$1,500,000; purpose, to carry on a cold storage and warehouse business. The directors are: Wm. Griffith, L. Sterne, L. W. Just and J. McGregor, all of London, Eng.; and A. J. Foward, Ottawa.

Canada Rolling Stock Co., Limited, Amherst, N. S.; capital, \$250,000; purpose, to manufacture and deal in locomotives and cars and rolling stock of all kinds. The directors are: M. Curry, N. A. Rhodes, T. R. Black, C. T. Hillson, and E. N. Rhodes, all of Amherst.

The Peterboro Cement Roofing Co., Limited, Peterboro; capital, \$40,000; purpose, to take over the Peterboro Cement Roofing Co. The directors are: Jas. Thompson, Havelock, Ont.; A. Cunningham, Norwood, Ont.; Wm. Shea, W. McMillan, and J. H. Symons, all of Peterboro.

The Young Grain Co., Limited, Winnipeg; capital, \$300,000; purpose, to deal in grain elevators and mill property. The directors are: F. McNaughton Young, Killarney, Man.; C. A. Young, Winnipeg; D. D. Young, Dunrea, Man.; F. W. Young, Boissevain, Man.; and T. Buck, Killarney, Man.

The Drummond Cotton and Bleaching Co., Limited, Montreal; capital, \$150,000; purpose, to manufacture and deal in cotton goods of all kinds. The directors are: Wm. Mitchell, Drummondville, Que.; J. W. Woods, Ottawa; G. A. Gatehouse, M. L. Hersey, G. Bothamley and F. W. Hibbard, all of Montreal.

Cie d' Aqueduc et d' Eclairage de Beloeil, Limitee, Beloeil, Que.; capital, \$20,000; purpose, to construct and main-



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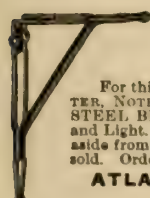
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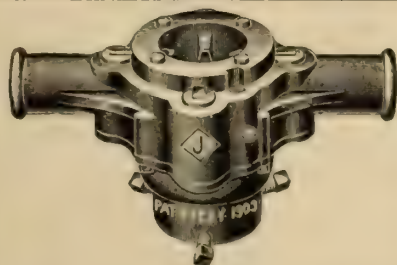
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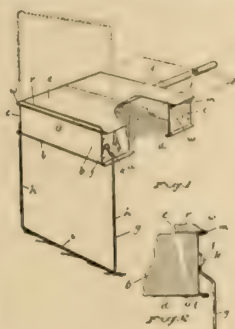
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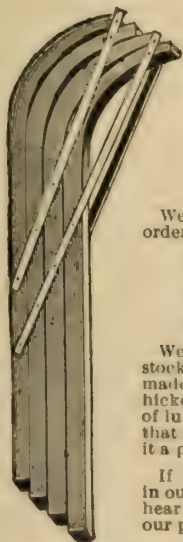
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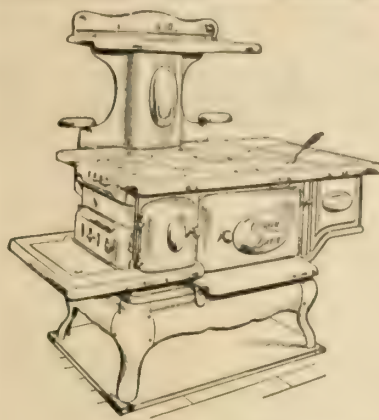
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STOVE LINING**

you cannot have any trouble. The easiest  
and best thing out. So good that the wonder  
is that any other stove lining was used.

Send for circular and price list.

**G. F. Sterne & Son**

Sole Makers

**BRANTFORD, ONT.**

J. H. HANSON, 422 St. Paul St., MONTREAL, Eastern Agent.







# American Steel & Wire Co.

**New York**  
Empire Building

**Montreal**  
N. Y. Life Building

**Chicago**  
The Rookery

## BARBED WIRE CALVANIZED PLAIN WIRE PLAIN TWIST CABLE FENCING

**Telegraph and Telephone Wire; Mattress, Broom, Weaving Wires of every description; Rail Bonds, Bale Ties, Special Wires for all purposes, Springs, Horse Shoes, Wire Rope, Cold-drawn Steel Shafting.**

### PAINTS AND OILS.

#### COLORS IN OIL.

| 1 lb. tins, pure       |      |
|------------------------|------|
| Venetian red, per lb.  | 0 08 |
| Chrome yellow          | 0 15 |
| Golden ochre           | 0 08 |
| French "               | 0 06 |
| Marine black           | 0 04 |
| Chrome green           | 0 10 |
| French permanent green | 0 13 |
| Signwriters' black     | 0 15 |

#### COLORS DRY.

| Pure in bbls., per cwt. Less than this quantity is extra. |          |
|-----------------------------------------------------------|----------|
| Common ochre, bbls.                                       | 2 50     |
| Yellow ochre                                              | 1 12 1/2 |
| Brussels ochre                                            | 2 75     |
| Venetian red                                              | 1 50     |
| English oxides                                            | 3 00     |
| American oxides                                           | 1 25     |
| Canadian red oxides                                       | 1 50     |
| Super magnetic oxides, 95 p.c.                            | 2 00     |
| Burnt sienna                                              | 9 00     |
| " umber                                                   | 6 00     |
| Raw umber                                                 | 6 00     |
| Drop black                                                | 12 00    |
| Chrome yellow                                             | 0 18     |
| Chrome greens                                             | 5 50     |
| French green                                              | 0 09     |
| Golden ochre                                              | 2 75     |
| Ultramarine blue, in 28-lb. bxs.                          | 7 00     |
| Fire proof mineral                                        | 1 00     |
| Genuine Eng. Litharge                                     | 4 50     |
| Mortar color                                              | 1 00     |
| Pure Indian red, lb.                                      | 0 09     |
| Whiting, bbl                                              | 0 65     |
| English vermilion in 30-lb. bgs.                          | 0 85     |

#### WHITE LEAD.

| Pure.                        | Per 100 lb. |
|------------------------------|-------------|
| No. 1                        | 4 75        |
| No. 2                        | 4 50        |
| No. 3                        | 4 25        |
| No. 4                        | 3 87 1/2    |
| Munro's Select Flake White   | 3 50        |
| Elephant and Decorators Pure | 4 75        |
| Monarch                      | 5 00        |
| Decorators Pure              | 4 75        |
| Essex Genuine                | 4 25        |
| Sterling Pure                | 5 00        |
| Island City Pure             | 5 00        |
| Ramsay's Pure Lead           | 4 75        |
| Ramsay's Exterior            | 4 50        |

#### RED LEAD.

|                                 |        |        |
|---------------------------------|--------|--------|
| Genuine, 560 lb. casks, per cwt | \$4 25 | \$4 50 |
| Genuine, 100 lb. kegs.          | 4 75   |        |
| No. 1, 560 lb. casks, per cwt.  | 4 00   |        |
| No. 1, 100 lb. kegs, per cwt.   | 4 25   |        |

#### WHITE ZINC.

|                |      |          |
|----------------|------|----------|
| Extra Red Seal | 0 06 | 0 08     |
| French V. M.   | 0 06 | 0 06 1/2 |
| Lehigh         | 0 06 | 0 06 1/2 |

#### DRY WHITE LEAD.

|              |      |
|--------------|------|
| Pure, casks  | 4 25 |
| Pure, kegs   | 4 50 |
| No. 1, casks | 4 00 |
| No. 1, kegs. | 4 25 |

#### PREPARED PAINTS.

| In 1, 1 and 1-gallon tins.      |      |
|---------------------------------|------|
| Pure, per gallon                | 1 20 |
| Second qualities, per gallon    | 1 00 |
| Barn (in bbls.)                 | 0 60 |
| The Sherwin-Williams paints     | 1 30 |
| Canada Paint Co.'s pure         | 1 25 |
| Toronto Lead & Color Co.'s pure | 1 25 |
| Sanderson Pease's pure          | 1 20 |
| Standard Co.'s "New Era"        | 1 30 |
| "Globe" barn                    | 60   |
| French Frost Co.'s "A" and "B"  | 1 25 |
| "British Navy deck              | 1 50 |
| Henderson & Potts' "Anchor"     | 1 35 |
| Ramsay's paints, Pure, per gal. | 1 20 |
| " Thistle                       | 1 00 |
| " Outside, bbls                 | 0 55 |
| Island City House Paint         | 1 25 |
| " Floor                         | 1 25 |
| Sterling House Paint            | 1 20 |
| " Floor                         | 1 10 |
| National                        | 1 05 |

### PUTTY.

|                                            |      |
|--------------------------------------------|------|
| Bulk in bbls.                              | 1 45 |
| Bulk in less quantity                      | 1 70 |
| Bladders in bbls.                          | 1 70 |
| Bladders in kegs, boxes or loose.          | 1 85 |
| 25 lb. tins                                | 1 80 |
| 12 1/2 lb. tins                            | 2 05 |
| Bladders in bulk or tins less than 100 lb. | 1 85 |

### VARNISHES.

| In 5-gal. lots.                                                         | Per gal.           | Net. |
|-------------------------------------------------------------------------|--------------------|------|
| Carriage, No. 1                                                         | 1 50               | 1 60 |
| Pale durable body                                                       | 4 10               | 4 25 |
| " rubbing                                                               | 2 85               | 3 20 |
| Gold size, Japan                                                        | 1 50               | 1 60 |
| No. 1 brown Japan                                                       | 0 85               | 0 90 |
| Elastic oak                                                             | 1 50               | 1 50 |
| Furniture, extra                                                        | 1 10               | 1 25 |
| No. 1                                                                   | 0 90               | 1 00 |
| Hard oil finish                                                         | 1 35               | 1 50 |
| Light oil finish                                                        | 1 60               | 1 70 |
| Damar                                                                   | 1 75               | 2 00 |
| Shellac, white                                                          | 2 40               | 2 50 |
| " orange                                                                | 2 30               | 2 40 |
| Turpentine, brown Japan                                                 | 1 10               | 1 20 |
| " black Japan                                                           | 1 10               | 1 20 |
| No. 1                                                                   | 0 85               | 0 90 |
| Elastilite varnish, 1 gal. can, each                                    | 2 00               |      |
| Granite floor finish, per gal.                                          | 2 75               |      |
| Maple Leaf coach enamel, size 1, \$1.20, size 2, 70c; size 3, 40c, each |                    |      |
| Sherwin-Williams' kopal varnish, assorted case, from                    | to 1 gal., \$2.50. |      |

### GLUE.

|                  |      |          |
|------------------|------|----------|
| Common           | 0 08 | 0 08 1/2 |
| French medal     | 0 10 | 0 14     |
| White, extra     | 0 18 | 0 22     |
| Gelatin          |      |          |
| Strip            | 0 18 | 0 20     |
| Coopers          | 0 19 | 0 20     |
| Huttlner         |      |          |
| Ground           | 0 12 | 0 16     |
| Cologne, genuine |      |          |

### HARDWARE.

#### AMMUNITION.

##### Cartridges.

|                                                                                                                       |  |
|-----------------------------------------------------------------------------------------------------------------------|--|
| B. B. Caps Dominion, 50 and 5 and 25 per cent.                                                                        |  |
| Rim Fire Pistol, discount 30 p.c., American.                                                                          |  |
| Rim Fire Cartridge, Dominion, 50 and 5 p.c.                                                                           |  |
| Central Fire, Military and Sporting, American, old 20 per cent. to list. B. B. Caps, discount 40 per cent., American. |  |
| Central Fire Pistol and Rifle, 3 p.c., Amer.                                                                          |  |
| Central Fire Cartridges, pistol sizes, Dominion, 30 per cent.                                                         |  |
| Central Fire Cartridges, Sporting and Military, Dominion, 15 per cent.                                                |  |
| Loaded and empty Shells, "Trap" and "Dominion" grades, 25 per cent. discount.                                         |  |
| Rival and Nitro, 10 per cent. advance on list.                                                                        |  |
| Brass Shot Shells, 55 per cent.                                                                                       |  |
| Primers, Dom., 30 per cent., American, \$1 75                                                                         |  |

#### Wads.

| per lb.                                                                              |        |
|--------------------------------------------------------------------------------------|--------|
| Best thick brown or grey felt wads, in 1-lb. bags                                    | \$0 70 |
| Best thick white card wads, in boxes of 500 each, 12 and smaller gauges              | 0 99   |
| Best thick white card wads, in boxes of 500 each, 10 gauge                           | 0 35   |
| Thin card wads, in boxes of 1,000 each, 12 and smaller gauges                        | 0 20   |
| Thin card wads, in boxes of 1,000 each, 10 gauge                                     | 0 25   |
| Chemically prepared black edge-grey cloth wads, in boxes of 250 each—                | Per M. |
| 11 and smaller gauge                                                                 | 0 60   |
| 9 and 10 gauges                                                                      | 0 70   |
| 7 and 8 "                                                                            | 0 90   |
| 5 and 6 "                                                                            | 1 10   |
| Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each— |        |
| 11 and smaller gauge                                                                 | 1 15   |
| 9 and 10 gauges                                                                      | 1 40   |
| 7 and 8 "                                                                            | 1 65   |
| 5 and 6 "                                                                            | 1 90   |

### ADZES.

|                             |          |
|-----------------------------|----------|
| Discount 20 per cent.       |          |
| Wright's, 80 lb. and over   | 0 10 1/2 |
| Hay Budden, 80 lb. and over | 0 09 1/2 |
| Brooks's, 80 lb. and over   | 0 11 1/2 |

### APPLE PARERS.

|                                                  |      |
|--------------------------------------------------|------|
| Woodruff Hudson, per doz., net                   | 4 50 |
| At GERS                                          |      |
| Gilmour's, discount 45 and 5 per cent. off list. |      |

### AXES.

|                          |       |
|--------------------------|-------|
| Chopping Axes            |       |
| Single bit, per doz.     | 7 00  |
| Double bit, " "          | 10 00 |
| Bench Axes, 40 per cent. |       |
| Broad Axes, 25 per cent. |       |
| Hunters' Axes            | 5 50  |
| Boys' Axes               | 6 25  |
| Splitting Axes           | 7 00  |
| Handled Axes             | 10 00 |

### AMERICAN AXE AND TOOL CO.

|                                        |       |
|----------------------------------------|-------|
| Red Ridge, boys' handled               | 5 75  |
| " hunters                              | 5 25  |
| Underhill American Bench Axes, 40 p.c. |       |
| AXE GREASE                             |       |
| Ordinary, per gross                    | 6 00  |
| Best quality                           | 10 00 |

### BELLS.

|                      |  |
|----------------------|--|
| Hand.                |  |
| Brass, 60 per cent.  |  |
| Nickel, 55 per cent. |  |

### Cow.

|                                          |  |
|------------------------------------------|--|
| American make, discount 63 1/2 per cent. |  |
| Canadian, discount 45 and 50 per cent.   |  |

### Door.

|                                                        |      |
|--------------------------------------------------------|------|
| Gongs, Sargent's                                       | 5 50 |
| Peterboro', discount 50 and 10 per cent. off new list. | 8 00 |

### Farm.

|                |      |
|----------------|------|
| American, each | 1 25 |
| House.         | 3 00 |

### House.

|                                     |       |
|-------------------------------------|-------|
| American, per lb.                   | 0 35  |
| Hand, per doz.                      | 3 35  |
| Moulders, per doz.                  | 7 50  |
| Blacksmiths', discount 40 per cent. | 10 00 |

### BELTING.

|                                                      |  |
|------------------------------------------------------|--|
| Extra, 60 per cent.                                  |  |
| Standard, 60 and 10 per cent.                        |  |
| No. 1, not wider than 6 in., 60, 10 and 10 per cent. |  |

### Belts.

|                                                  |  |
|--------------------------------------------------|--|
| Agricultural, not wider than 4 in., 75 per cent. |  |
| Auger.                                           |  |
| Gilmour's, discount 60 per cent.                 |  |
| Rockford, discount 50 and 10 per cent.           |  |
| Jennings' Gen., net list.                        |  |

### Car.

|                             |  |
|-----------------------------|--|
| Gilmour's, 47 1/2 per cent. |  |
| Expansive.                  |  |
| Clark's, 40 per cent.       |  |

### Gumlet.

|                           |      |
|---------------------------|------|
| Clark's, per doz.         | 0 65 |
| Diamond, shell, per doz.  | 1 00 |
| Nail and Spike, per gross | 2 25 |
| 5 20                      |      |

### BLIND AND RED STAPLES.

|                    |          |
|--------------------|----------|
| All sizes, per lb. | 0 07 1/2 |
| 0 12               |          |

### BOOTS AND SHOTS.

|                                   |           |
|-----------------------------------|-----------|
| Carriage Bolts, common (\$1 list) |           |
| " 3-16 and 1/2                    | 60 and 10 |
| " 5-16 and 1/2                    | 55 and 5  |
| " 7-16 and up                     | 55 and 5  |
| " full sq. (\$2 40 list)          | 60        |
| Norway Iron (\$3 list)            | 60        |

### Machine Bolts.

|                            |          |
|----------------------------|----------|
| Machine Bolts, 7-16 and up | 60       |
| Plough Bolts               | 55 and 5 |
| Blank Bolts                | 55 and 5 |
| Bolt Ends                  | 35 and 5 |

### Sleigh Shoe Bolts.

|                                            |    |
|--------------------------------------------|----|
| Sleigh Shoe Bolts                          | 70 |
| Couch Screws, cone point                   | 70 |
| Nuts, square, all sizes, 4c. per lb. off.  |    |
| Nuts, hexagon, all sizes, 4c. per lb. off. |    |
| Store Rods, per lb., 3/4 to 6c.            |    |

### BOOT CALKS.

|                        |             |
|------------------------|-------------|
| Small and medium, ball | per M. 4 25 |
| Small heel             | 4 50        |

### BRIGHT WIRE GOODS.

|                           |  |
|---------------------------|--|
| Discount 52 1/2 per cent. |  |
|---------------------------|--|

### BUTCHERS' CLEAVERS.

|          |          |       |
|----------|----------|-------|
| German   | per doz. | 6 00  |
| American | per doz. | 12 00 |
|          |          | 18 00 |

### BUTCHER KNIVES.

|          |          |      |
|----------|----------|------|
| Barley's | per doz. | 0 60 |
|          |          | 6 30 |

### BUILDING PAPER, ETC.

|                                                 |      |
|-------------------------------------------------|------|
| Tarred Felt, per 100 lb.                        | 1 85 |
| Ready roofing, 2 ply, not under 45 lb. per roll | 0 90 |
| Ready roofing, 3-ply, not under 65 lb. per roll | 1 15 |

### Carpet Felt.

|                       |                       |       |
|-----------------------|-----------------------|-------|
| Carpet Felt           | per ton               | 45 00 |
| Heavy Straw Sheathing | per ton               | 35 00 |
| Dry Sheathing         | per roll, 400 sq. ft. | 0 40  |

### Tar.

|                             |                |      |
|-----------------------------|----------------|------|
| Dry Fibre                   | 400 "          | 0 50 |
| " "                         | 400 "          | 0 55 |
| Tarred Fibre                | 400 "          | 0 65 |
| O K & I N L                 | 400 "          | 0 70 |
| Resin sized                 | 400 "          | 0 45 |
| Oiled Sheathing             | 400 "          | 1 00 |
| Oiled "                     | 400 "          | 0 70 |
| Roof Coating, in barrels    | per gal.       | 0 17 |
| Roof "                      | small packages | 0 25 |
| Refined Tar                 | per barrel     | 5 00 |
| Coal Tar                    | per barrel     | 4 00 |
| Coal Tar, less than barrels | per gal.       | 0 15 |
| Roofing Pitch               | per 100 lb.    | 1 00 |

### BULL RINGS.

|                                                      |  |
|------------------------------------------------------|--|
| Copper, \$2.00 for 2 1/2-inch, and \$1.90 for 2-inch |  |
|------------------------------------------------------|--|

### BUTTS.

|                                  |  |
|----------------------------------|--|
| Wrought Brass, net revised list. |  |
| Cast Iron.                       |  |

### Loose Pin, discount 60 per cent.

Copper, \$2.00 for 2½-inch, and \$1.90 for 2-inch

BUTTS.

### CARPET STRETCHERS.

|           |          |      |
|-----------|----------|------|
| American  | per doz. | 1 00 |
| Bullard's | per doz. | 6 50 |

### CANTORS.

|                                                |  |
|------------------------------------------------|--|
| Bed, new list, discount 55 to 57 1/2 per cent. |  |
| Plate, discount 52 1/2 to 57 1/2 per cent.     |  |

### CATTLE LEADERS.

|                |           |      |
|----------------|-----------|------|
| Nos. 32 and 33 | per gross | 7 50 |
|                |           | 8 50 |

### CHALK.

|                                             |  |
|---------------------------------------------|--|
| CASTORS.                                    |  |
| Bed, new list, discount 56 to 57½ per cent. |  |

### CHISELS.

|                                                |  |
|------------------------------------------------|--|
| Socket, Framing and Firmer                     |  |
| Broad's, discount 60 and 10 per cent.          |  |
| Worms' s, discount 50 and 10 per cent.         |  |
| P. S. & W. Extra, discount 60 and 10 per cent. |  |

### FOODS STOCK.

|                                      |                |
|--------------------------------------|----------------|
| Colonial Stock Foods, 50c. packages, |                |
| " " " 25c. pkgs.                     | per doz \$4 60 |
| " " " 10c. "                         | 2 60           |
| " " " 25-lb. pail, each              | 1 75           |
| Poultry Foods, 25c. packages         | 1 80           |
| Cough Powders, per doz               | 1 25           |
| Worm                                 | 1 25           |

### International Stock Foods, \$1 packages.

|                                     |       |
|-------------------------------------|-------|
| per doz.                            | 8 00  |
| International Stock Foods, per pail | 2 50  |
| " " " 10c. "                        | 2 50  |
| " " " 25-lb. pail, each             | 1 80  |
| " Poultry " \$1 packages            | 8 00  |
| " Worm Powders, 25c. packages       | 4 00  |
| " Fine Feeding (10c. per doz)       | 8 00  |
| " Phoenix Brand Syrup, per doz      | 8 00  |
| " Hoof Dressing                     | 6 00  |
| " Compound Antiseptic               | 12 00 |

### Also 25c. pkgs. at \$2 per doz. See page 47.

### CLIPS.

|                       |  |
|-----------------------|--|
| Axe, discount 65 p.c. |  |
|-----------------------|--|



# An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

## The Paterson Mfg. Co., Limited

Toronto and Montreal.

|                                             |        |         |                                                  |  |  |                                                |  |  |                                                  |  |  |
|---------------------------------------------|--------|---------|--------------------------------------------------|--|--|------------------------------------------------|--|--|--------------------------------------------------|--|--|
| COMPASSES, DIVIDERS, ETC.                   |        |         | GAUGES.                                          |  |  | Clothes line, No. 61..                         |  |  | Cabinet.                                         |  |  |
| American, discount 62½ to 65 per cent.      |        |         | Marking, Mortise, Etc.                           |  |  | Harness.....                                   |  |  | Eagle, discount 30 per cent.                     |  |  |
| CONDUCTOR PIPE.                             |        |         | Stanley's, discount 50 to 55 per cent.           |  |  | Hat and coat..... per gro.                     |  |  | Padlocks.....                                    |  |  |
| Plain or Corrugated.                        |        |         | Wire Gauges.                                     |  |  | Chandelier..... per doz.                       |  |  | English and Am..... per doz.                     |  |  |
| 1-inch..... per 100 feet                    | 3 00   |         | Winn's, Nos. 26 to 33..... each                  |  |  | Wrought hooks and staples                      |  |  | Eagle, discount 20 to 25 per cent.               |  |  |
| 3.....                                      | 4 00   |         | GILLET'S POWDERED LYE.                           |  |  | count 60 per cent.                             |  |  | <b>MACHINE SCREWS.</b>                           |  |  |
| 4.....                                      | 5 25   |         | 1-case, \$3.70; 3-case, \$3.60; 5-case and over, |  |  | Wire.                                          |  |  | Iron and Brass.                                  |  |  |
| 5.....                                      | 6 75   |         | \$3.50.                                          |  |  | Halt and coat, discount 60 per cent.           |  |  | Flat head, discount 25 per cent.                 |  |  |
| 6.....                                      | 9 00   |         | <b>HALTERS.</b>                                  |  |  | Screw, bright, discount 60 per cent.           |  |  | Round head, discount 20 per cent.                |  |  |
| CRADLES, GRAIN.                             |        |         | Rope, 1-inch..... per gross                      |  |  | HORSE NAILS.                                   |  |  | <b>MALLETS.</b>                                  |  |  |
| Canadian, discount 20 to 25 per cent.       |        |         | Rope, 1 to 1½-inch.....                          |  |  | "C" brand, 40, 10 and 7½ per cent. off list    |  |  | Tinmiths'..... per doz.                          |  |  |
| CROSSCUT SAW HANDLES.                       |        |         | Leather, 1-inch..... per doz.                    |  |  | "M" brand, 55, per cent.                       |  |  | Carpenters', hickory,.....                       |  |  |
| S. & D., No. 3..... per pair                | 0 17½  |         | Web.....                                         |  |  | Countersunk, 57½ per cent.                     |  |  | Lignum Vitae.....                                |  |  |
| S. & D., " 5.....                           | 0 22½  |         | <b>HAMMERS.</b>                                  |  |  | "Monarch," 50 and 7½ per cent.                 |  |  | Caulking, each.....                              |  |  |
| S. & D., " 6.....                           | 0 15   |         | Nail.                                            |  |  | "Peerless" 50 per cent. dis.                   |  |  | <b>MATTOCKS.</b>                                 |  |  |
| Boynton pattern.....                        | 0 20   |         | Maydole's, discount 5 to 10 per cent. Canadian   |  |  | F.O.B. Montreal                                |  |  | Canadian..... per doz.                           |  |  |
| DOOR SPRINGS.                               |        |         | discount 25 to 27½ per cent.                     |  |  | No. 2 No. 1                                    |  |  | American, discount 3½ per cent.                  |  |  |
| Torrey's Rod..... per doz.                  | 1 75   |         | Tack.                                            |  |  | and larger smaller.                            |  |  | German, 15 per cen                               |  |  |
| Coil, 9 to 11 in.....                       | 0 95   | 1 65    | Magnetic..... per doz.                           |  |  | Steel Shoes.                                   |  |  | Gem..... each                                    |  |  |
| English.....                                | 2 00   | 4 00    | Canadian..... per lb.                            |  |  | XL, sizes 1 to 5.....                          |  |  | Discount 25 per cent.                            |  |  |
| DRAW KNIVES.                                |        |         | Sledge.....                                      |  |  | Light, No. 2 and larger.....                   |  |  | <b>NAILS.</b>                                    |  |  |
| Coach and Wagon, discount 50 per cent.      |        |         | Ball Peen.                                       |  |  | No. 1 and smaller.....                         |  |  | 2d and 3d.....                                   |  |  |
| Carpenters' discount 60 and 10 per cent.    |        |         | English and Canadian, per lb.                    |  |  | Featherweight, all sizes 0 to 4.....           |  |  | 3d.....                                          |  |  |
| DRILLS.                                     |        |         | <b>HANDLES.</b>                                  |  |  | Toeweight, all sizes 1 to 4.....               |  |  | 4 and 5d.....                                    |  |  |
| Hand and Breast.                            |        |         | Are, 2nd growth, per doz. net                    |  |  | <b>JAPANNED WARE.</b>                          |  |  | 6 and 7d.....                                    |  |  |
| Miller's Falls, per doz., net list.         |        |         | Sore door..... per doz.                          |  |  | Discount 50 per cent.                          |  |  | 8 and 9d.....                                    |  |  |
| DRILL BITS.                                 |        |         | Fork.                                            |  |  | ICE PICKS.                                     |  |  | 10 and 12d.....                                  |  |  |
| Morris, discount 37½ to 40 per cent.        |        |         | C. & B., discount 40 per cent., revised list.    |  |  | Star..... per doz.                             |  |  | 16 and 20d.....                                  |  |  |
| Standard, discount 50 and 5 to 55 per cent. |        |         | Hoe.                                             |  |  | Brass spun 7½ per cent. discount off new list. |  |  | 30, 40, 50 and 60d (base).....                   |  |  |
| FAUCETS.                                    |        |         | C. & B., discount 40 per cent., revised list.    |  |  | Copper..... per lb.                            |  |  | Cut nails in carlots 5c. less.                   |  |  |
| Common, cork-lined, discount 35 per cent.   |        |         | Saw.                                             |  |  | American, 60 and 10 to 65 and 5 per cent.      |  |  | Wire nails in carlots are \$2.40.                |  |  |
| EAVETROUGHES.                               |        |         | American..... per doz.                           |  |  | <b>KEYS.</b>                                   |  |  | Steel cut nails 10c. extra.                      |  |  |
| 10-inch..... per 100 ft. 10 00              |        |         | Plane.                                           |  |  | Lock, Canadian dis. 40 to 40 and 10 per cent.  |  |  | Miscellaneous wire nails, discount 75 per cent.  |  |  |
| ELBOWS (stovepipe.)                         |        |         | Hammer and Hatchet.                              |  |  | Cabinet, trunk and padlock.                    |  |  | Coopers' nails, discount 30 per cent.            |  |  |
| 5 and 6-inch, common..... per doz.          |        |         | Canadian, discount 40 per cent.                  |  |  | American..... per gross                        |  |  | <b>NAIL PULLERS.</b>                             |  |  |
| 7-inch.....                                 |        |         | <b>HANGERS.</b>                                  |  |  | 0 60                                           |  |  | German and American.....                         |  |  |
| Polished, 15c. per dozen extra.             |        |         | doz. pairs.                                      |  |  | Doors, japanned and N.P., per                  |  |  | <b>NAIL SETS.</b>                                |  |  |
| ESCUTCHEONS.                                |        |         | Steel barn door.....                             |  |  | doz.....                                       |  |  | Square, round and octagon,                       |  |  |
| Discount 50 and 10 per cent., new list      |        |         | 8 00 10 00                                       |  |  | Bronze, Berlin..... per doz.                   |  |  | per gross.....                                   |  |  |
| ESCUTCHEON PINS.                            |        |         | Stearns, 4-inch.....                             |  |  | 2 75 3 25                                      |  |  | Diamond.....                                     |  |  |
| Iron, discount 40 per cent.                 |        |         | 6 00                                             |  |  | Shutter, porcelain, F. & L.                    |  |  | <b>POULTRY NETTING.</b>                          |  |  |
| FACTORY MILK CANS.                          |        |         | 5-inch.....                                      |  |  | screw..... per gross                           |  |  | 2-in. Mesh, 19 w.g., dis. 60 per cent.           |  |  |
| Discount off revised list, 40 per cent.     |        |         | 9 00                                             |  |  | White door knobs..... per doz.                 |  |  | 2-in. Mesh, 16 w.g. and heavier, 50 p.c.         |  |  |
| FILES AND RASPS.                            |        |         | Lane's covered—                                  |  |  | <b>HAY KNIVES.</b>                             |  |  | <b>OAKUM.</b>                                    |  |  |
| Great Western..... 70 and 10 per cent.      |        |         | No. 11, 5-foot run.....                          |  |  | Net prices.                                    |  |  | U. S. Navy..... per 100 lb.                      |  |  |
| 70 " 10 " "                                 |        |         | No. 11½, 10-foot run.....                        |  |  | Discount, 60 per cent.                         |  |  | Plumbers.....                                    |  |  |
| 70 " 10 " "                                 |        |         | No. 12, 10-foot run.....                         |  |  | LAMP WICKS.                                    |  |  | <b>OILERS.</b>                                   |  |  |
| 70 " 10 " "                                 |        |         | No. 14, 15-foot run.....                         |  |  | Cold Blast..... per doz.                       |  |  | McClary's Model galvanized                       |  |  |
| 70 " 10 " "                                 |        |         | 21 00                                            |  |  | No. 3, "Wright's".....                         |  |  | oil can, with pump, 5 gallon,                    |  |  |
| 70 " 10 " "                                 |        |         | 11 00                                            |  |  | Ordinary, with O burner.....                   |  |  | per dozen.....                                   |  |  |
| 70 " 10 " "                                 |        |         | 4 00                                             |  |  | Dashboard, cold blast.....                     |  |  | Davidson oilers, discount 40 per cent.           |  |  |
| 70 " 10 " "                                 |        |         | 3 75                                             |  |  | No. 0.....                                     |  |  | Zinc and tin, discount 50, 50 and 10 per cent.   |  |  |
| 70 " 10 " "                                 |        |         | 4 75                                             |  |  | Japanning, 50c. per doz. extra.                |  |  | Copper..... per doz.                             |  |  |
| <b>HARVEST TOOLS.</b>                       |        |         | 1½ x 3-16 in (100 ft).....                       |  |  | <b>LEMON SQUEEZERS.</b>                        |  |  | Brass.....                                       |  |  |
| Discount 60 per cent.                       |        |         | HATCHETS.                                        |  |  | Porcelain lined..... per doz.                  |  |  | 1 50 3 50                                        |  |  |
| Canadian, discount 40 to 42½ per cent.      |        |         | Shingle, Red Ridge 1, per doz.....               |  |  | Galvanized.....                                |  |  | Malleable, discount 25 per cent                  |  |  |
| Shingle, 2,.....                            |        |         | 4 40                                             |  |  | King, wood.....                                |  |  | <b>GALVANIZED PAIS.</b>                          |  |  |
| Barrel, Underhill.....                      |        |         | 4 85                                             |  |  | King, glass.....                               |  |  | Dufferin pattern pails, discount 45 per cent     |  |  |
| <b>HAT ENAMEL.</b>                          |        |         | 5 00                                             |  |  | All glass.....                                 |  |  | Flaring pattern, discount 45 per cent            |  |  |
| Henderson & Potts' "Anchor Brand"           |        |         | <b>HINGES.</b>                                   |  |  | <b>LINE'S.</b>                                 |  |  | Galvanized washtubs, discount 45 per cent        |  |  |
| Blind, Parker's, discount 60 per cent.      |        |         | Light T and strap, discount 65 and 5 per cent.   |  |  | Fish..... per gross                            |  |  | <b>PIECED WARE.</b>                              |  |  |
| Heavy T and strap, 4-in., per lb.....       |        |         | Screw hook and hinge—                            |  |  | Chalk.....                                     |  |  | Discount 40 per cent off list, June, 1899.       |  |  |
| 5-in.,.....                                 |        |         | 6 to 10 in..... per 100 lb.                      |  |  | Woodyatt, 10½-in. wheel, 14-in. cut ..         |  |  | 10-qt. flaring sap buckets, discount 40 per cent |  |  |
| 6-in.,.....                                 |        |         | 3 25                                             |  |  | Star, 9-in. " " " (net)                        |  |  | 6, 10 and 14-qt. flaring pails dis. 40 per cent. |  |  |
| 8-in.,.....                                 |        |         | 10 50                                            |  |  | Daisy, 8-in. " " " (net)                       |  |  | Creamer cans, discount 40 per cent.              |  |  |
| 10-in.,.....                                |        |         | Spring, No. 20, per gro. pairs.....              |  |  | Philadelphia, 7½-in. " " "                     |  |  | <b>PICKS.</b>                                    |  |  |
| <b>HOES.</b>                                |        |         | Garden, Mortar, etc., discount 60 per cent.      |  |  | Ontario, 7½-in. " " "                          |  |  | Per dozen.....                                   |  |  |
| Planter..... per doz.                       |        |         | 4 00 4 50                                        |  |  | King Edw'd, 12-in. " " "                       |  |  | <b>PICTURE NAILS.</b>                            |  |  |
| Tinned cast, 35 per cent.                   |        |         | <b>HOLLOW WARE.</b>                              |  |  | Discount, 50 per cent., with freight conces-   |  |  | Porcelain head..... per gross                    |  |  |
| Garden, Mortar, etc., discount 60 per cent. |        |         | <b>HOOKS.</b>                                    |  |  | sions in quantity shipments.                   |  |  | Brass head.....                                  |  |  |
| Planter..... per doz.                       |        |         | Cast Iron.                                       |  |  | Maxwell & Sons:                                |  |  | Tin and gilt, discount 75 per cent.              |  |  |
| Bird cage..... per doz.                     |        |         | 0 50 1 10                                        |  |  | 10½-in. high wheel.....                        |  |  | <b>PINE TAR.</b>                                 |  |  |
| <b>GLASS.</b>                               |        |         | Window. Box Price                                |  |  | 9-in.....                                      |  |  | ½ pint in tins..... per gross                    |  |  |
| Window. Box Price                           |        |         | Star                                             |  |  | 8-in.....                                      |  |  | 1 " " " " " " " " "                              |  |  |
| Size United                                 | Per    | Per     | D Diamond                                        |  |  | Discount 50 per cent.                          |  |  | <b>PLANES.</b>                                   |  |  |
| Inches.                                     | 50 ft. | 100 ft. | 60 ft.                                           |  |  | Canadian, 50 to 50 and 10 per cent.            |  |  | Wood bench, Canadian discount 40 per cent.,      |  |  |
| Under 26.....                               | 3 80   | 5 06    | Per                                              |  |  | Russell & Erwin..... per doz.                  |  |  | American discount 60 per cent.                   |  |  |
| 26 to 40.....                               | 4 00   | 5 44    | Per                                              |  |  |                                                |  |  | Wood, fancy, Canadian or America 37½ to          |  |  |
| 41 to 50.....                               | 4 50   | 6 56    | Per                                              |  |  |                                                |  |  | 40 per cent.                                     |  |  |
| 51 to 60.....                               | 4 75   | 6 82    | Per                                              |  |  |                                                |  |  |                                                  |  |  |
| 61 to 70.....                               | 5 00   | 7 33    | Per                                              |  |  |                                                |  |  |                                                  |  |  |
| 71 to 80.....                               | 5 30   | 10 75   | Per                                              |  |  |                                                |  |  |                                                  |  |  |
| 81 to 90.....                               | 5 50   | 12 30   | Per                                              |  |  |                                                |  |  |                                                  |  |  |
| 91 to 95.....                               | 5 75   | 15 00   | Per                                              |  |  |                                                |  |  |                                                  |  |  |
| 96 to 100.....                              | 6 00   | 18 00   | Per                                              |  |  |                                                |  |  |                                                  |  |  |
| Discount 15 per cent                        |        |         |                                                  |  |  |                                                |  |  |                                                  |  |  |



# The New U.M.C. 33 Primers

give an added ballistic value to the powder and shot charges in all U. M. C. smokeless powder shells.

## THE NO. 3 U. M. C. PRIMERS

were the first and best primers for smokeless powder ever made here or abroad—until the advent of the new U.M.C. 33 primers, which were substituted for them some time ago.

The U.M.C. Southern Squad used shells primed with the new 33 primers.

## The Union Metallic Cartridge Co.

Agency, 313 Broadway, New York, N.Y.

Factory, BRIDGEPORT, CONN.

| PLANE IRONS.                                    |                      | SAP SHOUTS.                                       |                       | STAPLES.                                       |                       | ENAMELLED WARE.                                |                         |
|-------------------------------------------------|----------------------|---------------------------------------------------|-----------------------|------------------------------------------------|-----------------------|------------------------------------------------|-------------------------|
| English .....                                   | per doz. 2 00 5 00   | Bronzed iron with hooks ... per 1,000             | 7 50                  | Galvanized .....                               | 3 00                  | White, Princess, Turquoise, Blue and White     | discount 50 per cent.   |
| PLIERS AND NIPPERS.                             |                      | "Eureka" tinned steel, hooks "                    | 8 00                  | Plain .....                                    | 2 80                  | Diamond, Famous, Premier, discount 50 and      | 10 per cent.            |
| Butt's genuine, per doz. pairs, discount        |                      | SAWS.                                             |                       | Coopers', discount 45 per cent.                |                       | Granite or Pearl, Imperial, Crescent, discount | 50, 10 and 10 per cent. |
| Butt's imitation ... per doz.                   | 5 00 9 00            | Hand, Disston's, discount 12 1/2 per cent         |                       | Poultry netting staples, discount 40 per cent. |                       | Primmer steel ware, 40 per cent.               |                         |
| German .....                                    | 0 60 0 60            | S. & D., discount 40 per cent.                    |                       | STOCKS AND DIES.                               |                       | "Star" decorated steel and decorated white,    | 25 per cent.            |
| PRESSED SPIKES.                                 |                      | Crosscut, Disston's ... per foot                  | 0 35 0 55             | American discount 25 per cent.                 |                       |                                                |                         |
| Discount 20 per cent.                           |                      | S. & D., discount 35 per cent. on Nos. 2 and 3.   |                       | STONE.                                         |                       |                                                |                         |
| PULLEYS.                                        |                      | Hack, complete ... each                           | 0 75 2 75             | Washita .....                                  | per lb. 0 28 0 60     |                                                |                         |
| Hothouse .....                                  | per doz. 0 55 1 00   | " frame only ... each                             | 0 50 1 25             | Hindostan .....                                | " 0 06 0 07           |                                                |                         |
| Axle .....                                      | " 0 22 0 33          | SASH WEIGHTS.                                     |                       | Labrador slip .....                            | " 0 09 0 13           |                                                |                         |
| Screw .....                                     | " 0 27 1 00          | Sectional .....                                   | per 100 lb. 2 00 2 25 | Turkey Axle .....                              | " 0 15 0 15           |                                                |                         |
| Awning .....                                    | " 0 35 2 50          | Solid .....                                       | " 1 50 1 75           | Arkansas .....                                 | " 0 30 1 50           |                                                |                         |
| PUMPS.                                          |                      | Per lb. ...                                       | SASH CORD. 0 28 0 30  | Water-of-Ayr .....                             | " 0 10 5 00           |                                                |                         |
| Canadian cistern .....                          | 1 80 3 80            | SAW SETS. per doz.                                |                       | Scythe .....                                   | per gross 3 50 5 00   |                                                |                         |
| Canadian pitcher spout .....                    | 1 40 2 10            | Lincoln and Whiting .....                         | 4 75                  | Grind, 2-in., 40 to 200 lb., per ton           | 25 00                 |                                                |                         |
| PUNCHES.                                        |                      | Hand Sets, Perfect .....                          | 4 00                  | " under 40 lb.,                                | 28 00                 |                                                |                         |
| Saddler's .....                                 | per doz. 1 00 1 85   | X-Cut Sets, .....                                 | 7 50                  | " under 2 in. thick,                           | 29 00                 |                                                |                         |
| Conductor's .....                               | 3 00 15 00           | SCALES.                                           |                       | STOVEPIPES.                                    |                       |                                                |                         |
| Tinners', solid .....                           | 0 72                 | Gurney Standard, 40 per cent.                     |                       | 5 and 6 inch, per 100 lengths                  | 7 00                  |                                                |                         |
| " hollow .....                                  | per inch 1 00        | Gurney Champion, 50 per cent.                     |                       | 7 inch .....                                   | 7 50                  |                                                |                         |
| RAKES.                                          |                      | Burrow, Stewart & Mine-                           |                       | ENAMEL STOVE POLISH.                           |                       |                                                |                         |
| Wood .....                                      | per doz. net 1 20 up | Imperial Standard, discount 40 per cent.          |                       | No. 4, 3 doz. in case, net cash                | 4 80                  |                                                |                         |
| RAZORS.                                         |                      | Weight Beams, discount 35 per cent.               |                       | No. 6, 3 doz. in case .....                    | 8 40                  |                                                |                         |
| Elliot's .....                                  | 4 00 18 00           | Champion Scales, discount 50 per cent.            |                       | TACKS, BRADS, ETC.                             |                       |                                                |                         |
| Geo. Butler's & Co. s. ....                     | 7 50 11 00           | Fairbanks standard, discount 35 per cent.         |                       | Carpet tacks, blued .....                      | 80 and 15             |                                                |                         |
| Bokers' .....                                   | 12 50 15 00          | " Dominion, discount 55 per cent.                 |                       | " " (in kegs) .....                            | 80 and 20             |                                                |                         |
| Wade & Butcher's .....                          | 3 60 10 00           | " Richelieu, discount 55 per cent.                |                       | Cut tacks, blued, in dozens only               | 80                    |                                                |                         |
| Thiele & Quack's .....                          | 7 00 12 00           | Warren's new Standard, discount 40 per cent.      |                       | " 1/2 weights .....                            | 60                    |                                                |                         |
| Carbo Magnetic .....                            | 15 00                | " Champion, discount 50 per cent.                 |                       | Swedes cut tacks, blued and tinned-            |                       |                                                |                         |
| Griffon Barber's Favorite .....                 | 10 75                | " Weight beams, discount 35 per cent.             |                       | In bulk .....                                  | 80 and 10             |                                                |                         |
| Griffon No. 65 .....                            | 13 00                | SCREW DRIVERS.                                    |                       | In dozens .....                                | 75                    |                                                |                         |
| Griffon Safety Razors .....                     | 13 50                | Sargent's .....                                   | per doz. 0 65 1 00    | Swedes, upholsterers', bulk .....              | 85, 12 1/2 and 12 1/2 |                                                |                         |
| Griffon Strapping Machines .....                | 13 50                | SCREEN DOORS.                                     |                       | " brush, blued and tinned                      | 70                    |                                                |                         |
| Lewis Bros' "Klean Kutter" .....                | 8 50 10 50           | Common doors, 2 or 3 panel, walnut                |                       | bulk .....                                     | 70                    |                                                |                         |
| Clauss Straps, 50 and 10 per cent.              |                      | stained, 4-in. style .....                        | per doz. 6 50         | Swedes, gimp, blued, tinned and                |                       |                                                |                         |
| REGISTERS.                                      |                      | Common doors, 2 or 3 panel, yellow and            |                       | japaned .....                                  | 75 and 12 1/2         |                                                |                         |
| Discount 40 per cent.                           |                      | green stained, 4-in. style .....                  | per doz. 6 75         | Zinc tacks .....                               | 35                    |                                                |                         |
| RIVETS AND BURS.                                |                      | Common doors, 2 or 3 panel, in natural            |                       | Leather carpet tacks .....                     | 55                    |                                                |                         |
| Iron Rivets, black and tinned, 60 and 10 p.c.   |                      | colors, oil finish .....                          | per doz. 8 75         | Copper tacks .....                             | 50                    |                                                |                         |
| Iron Burrs, discount 35 per cent.               |                      | 3-in. style 20c. per dozen less.                  |                       | Copper nails, black .....                      | 52 1/2                |                                                |                         |
| Extras on Iron Rivets in 1-lb. cartons, 1c.     |                      | SCREWS.                                           |                       | Trunk nails, blued .....                       | 65 and 5              |                                                |                         |
| per lb.                                         |                      | Wood, F. H., bright and steel, discount 87 1/2    |                       | Clout nails, blued .....                       | 65 and 5              |                                                |                         |
| Extras on Iron Rivets in 1/2-lb. cartons, 1c.   |                      | per cent.                                         |                       | Chair nails .....                              | 35                    |                                                |                         |
| per lb.                                         |                      | Wood, R. H., bright, dis. 82 1/2 per cent.        |                       | Patent brads .....                             | 40                    |                                                |                         |
| Copper Rivets, with usual proportion burrs, 45  |                      | " F. H., brass, dis. 80 per cent.                 |                       | Fine finishing .....                           | 40                    |                                                |                         |
| per cent. Cartons, 1c. per lb. extra, net.      |                      | " R. H., dis. 75 per cent.                        |                       | Lining tacks, in papers .....                  | 10                    |                                                |                         |
| Copper Burrs only, discount 30 and 10 per cent. |                      | " F. H., bronze, dis. 75 per cent.                |                       | " in bulk .....                                | 15                    |                                                |                         |
| Extras on Tinned or Coppered Rivets, 1/2-lb.    |                      | " R. H., dis. 70 per cent.                        |                       | Saddle nails, in bulk .....                    | 15                    |                                                |                         |
| cartons, 1c. per lb.                            |                      | Drive Screws, dis. 87 1/2 per cent.               |                       | Tufting buttons, 22 line, in doz-              |                       |                                                |                         |
|                                                 |                      | Bench, wood .....                                 | per doz. 3 25 4 00    | ens only .....                                 | 60                    |                                                |                         |
|                                                 |                      | " iron .....                                      | 4 25 5 00             | Zinc glaziers' points .....                    | 5                     |                                                |                         |
|                                                 |                      | Set, case hardened, dis. 60 per cent.             |                       | Double pointed tacks, papers .....             | 90 and 10             |                                                |                         |
|                                                 |                      | Square Cap, dis. 50 and 5 per cent.               |                       | bulk .....                                     | 40                    |                                                |                         |
|                                                 |                      | Hexagon Cap, dis. 45 per cent.                    |                       | Clinch and duck rivets .....                   | 45                    |                                                |                         |
|                                                 |                      | SCYTHES.                                          |                       | TAPE LINES.                                    |                       |                                                |                         |
|                                                 |                      | Per doz. net .....                                | 6 00 9 00             | English, ass skin .....                        | 2 75 5 00             |                                                |                         |
|                                                 |                      | SCYTHE SNATHS.                                    |                       | English, Patent Leather .....                  | 5 50 9 75             |                                                |                         |
|                                                 |                      | Canadian, discount 40 per cent.                   |                       | Chesterman's .....                             | each 2 85             |                                                |                         |
|                                                 |                      | SHEARS.                                           |                       | steel .....                                    | each 0 80 8 00        |                                                |                         |
|                                                 |                      | Clauss, nickel, discount 80 per cent.             |                       | TINNERS' SNIPS.                                |                       |                                                |                         |
|                                                 |                      | Clauss, Japan, discount 87 1/2 per cent.          |                       | Per doz. .....                                 | 3 00 15 00            |                                                |                         |
|                                                 |                      | Clauss, tailors, discount 40 per cent.            |                       | Clauss, discount 35 per cent.                  |                       |                                                |                         |
|                                                 |                      | Seymour's, discount 50 and 10 per cent.           |                       | THERMOMETERS.                                  |                       |                                                |                         |
|                                                 |                      | SHOVELS AND SPADES.                               |                       | Tin case and dialy, 75 to 75 and 10 per cent.  |                       |                                                |                         |
|                                                 |                      | Canadian, discount 45 per cent.                   |                       | (steel)                                        |                       |                                                |                         |
|                                                 |                      | SINKS.                                            |                       | Game, Newhouse, discount 25 per cent.          |                       |                                                |                         |
|                                                 |                      | Cast iron, 16 x 24 .....                          | 0 85                  | Game, H. & N., P. S. & W., 65 per cent.        |                       |                                                |                         |
|                                                 |                      | " 18 x 30 .....                                   | 1 00                  | Game, steel, 72 1/2, 75 per cent.              |                       |                                                |                         |
|                                                 |                      | " 18 x 36 .....                                   | 1 40                  | TROWELS.                                       |                       |                                                |                         |
|                                                 |                      | SNATS.                                            |                       | Disston's, discount 10 per cent.               |                       |                                                |                         |
|                                                 |                      | Harness, German, discount 25 per cent.            |                       | German's .....                                 | per doz. 4 75 6 00    |                                                |                         |
|                                                 |                      | Lock, Andrews' .....                              | 4 50 11 50            | S. & D., discount 35 per cent.                 |                       |                                                |                         |
|                                                 |                      | SOLDERING IRONS.                                  |                       | TWINERS.                                       |                       |                                                |                         |
|                                                 |                      | 1, 1 1/2-lb. .....                                | per lb. 0 37          | Bag, Russian .....                             | per lb. 0 27          |                                                |                         |
|                                                 |                      | 2-lb. or over .....                               | 0 34                  | Wrapping, cotton, 3-ply .....                  | 0 24                  |                                                |                         |
|                                                 |                      | SQUARES.                                          |                       | " 4-ply .....                                  | 0 27                  |                                                |                         |
|                                                 |                      | Iron, No. 493 .....                               | per doz. 2 40 2 55    | Mattress .....                                 | per lb. 0 33 0 45     |                                                |                         |
|                                                 |                      | " No. 494 .....                                   | 3 25 3 40             | Staging .....                                  | " 0 27 0 35           |                                                |                         |
|                                                 |                      | Steel, discount 60 to 60 and 5 per cent.          |                       | VISES.                                         |                       |                                                |                         |
|                                                 |                      | Try and Bevel, discount 50 to 52 1/2 per cent.    |                       | Wright's .....                                 | 0 13                  |                                                |                         |
|                                                 |                      | STAMPED WARE.                                     |                       | Brook's .....                                  | 0 12 1/2              |                                                |                         |
|                                                 |                      | Plain, discount 75 and 12 1/2 per cent. off re-   |                       | Pipe Vise, Hinge, No. 1 .....                  | 3 50                  |                                                |                         |
|                                                 |                      | vised list.                                       |                       | " No. 2 .....                                  | 5 50                  |                                                |                         |
|                                                 |                      | Retinned, discount 75 per cent. off revised list. |                       | Saw Vise .....                                 | 4 50 9 00             |                                                |                         |
|                                                 |                      |                                                   |                       | WIRE FENCING.                                  |                       |                                                |                         |
|                                                 |                      |                                                   |                       | Galvanized barb .....                          | 2 75                  |                                                |                         |
|                                                 |                      |                                                   |                       | Galvanized, plain twist .....                  | 2 75                  |                                                |                         |
|                                                 |                      |                                                   |                       | Galvanized barb, f.o.b. Cleveland, \$2 55 in   |                       |                                                |                         |
|                                                 |                      |                                                   |                       | less than carlots, and \$2 45 in carlots.      |                       |                                                |                         |
|                                                 |                      |                                                   |                       | COILED SPRING WIRE.                            |                       |                                                |                         |
|                                                 |                      |                                                   |                       | High Carbon, No. 9 .....                       | \$2 70                |                                                |                         |
|                                                 |                      |                                                   |                       | " No. 11 .....                                 | 3 35                  |                                                |                         |
|                                                 |                      |                                                   |                       | " No. 12 .....                                 | 3 95                  |                                                |                         |
|                                                 |                      |                                                   |                       | WIRE CLOTH.                                    |                       |                                                |                         |
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|                                                 |                      |                                                   |                       | Square .....                                   | 59 00                 |                                                |                         |
|                                                 |                      |                                                   |                       | Eclipse, per doz. ....                         | 48 00                 |                                                |                         |
|                                                 |                      |                                                   |                       | Downsall .....                                 | 36 00                 |                                                |                         |
|                                                 |                      |                                                   |                       | New Century, per doz. ....                     | 72 00                 |                                                |                         |
|                                                 |                      |                                                   |                       | Common Improved .....                          | 33 00                 |                                                |                         |
|                                                 |                      |                                                   |                       | Daisy .....                                    | 48 00                 |                                                |                         |
|                                                 |                      |                                                   |                       | WRINGERS.                                      |                       |                                                |                         |
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|                                                 |                      |                                                   |                       | Royal Canadian .....                           | 24 00                 |                                                |                         |
|                                                 |                      |                                                   |                       | Royal American .....                           | 24 00                 |                                                |                         |
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|                                                 |                      |                                                   |                       | Lightning .....                                | 27 00                 |                                                |                         |
|                                                 |                      |                                                   |                       | Terms, 4 months, 3 per cent. 30 days           |                       |                                                |                         |
|                                                 |                      |                                                   |                       | WROUGHT IRON WASHERS.                          |                       |                                                |                         |
|                                                 |                      |                                                   |                       | Canadian make, discount 60 per cent.           |                       |                                                |                         |



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| Canada Metal Co.                   | 19                 | Hamilton Powder Co.                | 21                  | Morton, B. K., & Co.              | 35                  | Smith & Hemenway Co.              | 57                  |
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| Canadian Carriage and Mfg. Co.     | 14                 | Harrington & Richardson Arms Co.   | 19                  | McClary Mfg. Co.                  | 38                  | Stearns, G. F., & Son.            | 61                  |
| Canadian Heating & Ventilating Co. | 61                 | Hemisch, R., Sons Co.              | 4                   | McDougall, R. Co.                 | 35                  | Stewart, Jas., Mfg. Co.           | 51                  |
| Canadian Oil Co.                   | 45                 | Howland, H. S., Sons & Co.         | 13                  | McGregor-Banwell Fence Co.        | 6                   | Summers, John, & Sons.            | 60                  |
| Canadian Rubber Co.                | 1                  | Hyde, E. & Co.                     | 35                  | Newman, W., & Sons.               | 50                  | Syracuse Smelting Works.          | 19                  |
| Canadian Sewer Pipe Co.            | 61                 | Imperial Varnish and Color Co.     | 42                  | Nobles & Houde.                   | 47                  | Taylor-Forbes Co.                 | outside front cover |
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| Cornor, J. H., & Sons.             | 68                 | Ironside, Son & Co.                | 68                  | Oakey, John, & Sons.              | 68                  | Thorne, R. E.                     | 47                  |
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| Consumers Cordage Co.              | 7                  | Ives, H. R. Co.                    | 57                  | Oil and Colouman's Journal.       | 5                   | United Factories.                 | 27                  |
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| Davison Mfg. Co.                   | 68                 | Jenking, A. O.                     | 57                  | Ormsby, A. B., Co.                | 60                  | Western Wire Nail Co.             | 6                   |
| Davison, Thos. Mfg. Co.            | 57                 | Jones & Barclay.                   | 68                  | Owen Sound Wire Fence Co.         | 6                   | Wilcox Mfg. Co.                   | 8                   |
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| Deseronto Iron Co.                 | 35                 | Kemp Mfg. Co.                      | 8                   |                                   |                     |                                   |                     |
| Davis, P. D., & Co.                | 47                 | Kerr Engine Co.                    | 19                  |                                   |                     |                                   |                     |
| Dominion Belting Co.               | 19                 |                                    |                     |                                   |                     |                                   |                     |
| Dominion Wire Mfg. Co.             | 5                  |                                    |                     |                                   |                     |                                   |                     |

## HARDWARE DEALER AS AN EDUCATOR.

AT the annual convention of the Michigan Retail Hardware Dealers' Association held recently at Grand Rapids, J. H. Whitney read the following paper, which is worthy of the attention of hardware dealers generally.

"Every staple article commonly found in a hardware store was at one time a specialty. Some master mind had conceived an idea, thought about it, dreamed about it, experimented and had finally brought out an article of merit—crude, perhaps, at first, but by patient industry perfected it and placed it on the market. It may have taken years of energy and patient toil to bring the article to perfection, but it remained for the retail hardware dealer to bring the same into general use, for the benefit of all mankind. When the specialty man calls on you with his wares do not 'turn him down,' but thoroughly examine what he has, and if in your judgment the article has merit and you see where it might be useful to any of your customers, order a sample, familiarize yourself with its construction and use, and, before you realize it, your specialty will become a staple article with which you will not have any competition and upon which you may realize a living profit.

"The retail hardware dealer has edu-

cated the farmer into the use of improved machinery, on the farm, thereby doing away with the drudgery of farm life, and giving himself and family better opportunities of improving their minds in the attainment of useful knowledge. He has educated the housewife so that instead of using the old-fashioned fireplace of our grandparent, with its swinging crane and cumbersome iron pots and kettles, her kitchen now shines with the elegant planished steel range, with its shining nickel trimmings, handsome enough to grace a parlor.

"There is not any greater menace to the industrial welfare of the agricultural districts and smaller towns and villages than the present catalogue house competition. If the people are to be supplied by these agencies, it means, to a certain extent, the depopulation of the thousands of populous villages of our country, which have become beauty spots upon the face of the earth, and are filled with an intelligent and happy people who are engaged in the business of supplying the people the necessities and luxuries of life. It is our duty to impress upon the minds of our customers the importance of purchasing their goods at home.

"Talk quality; get the reputation of selling good goods, and keep it; get the reputation of buying goods for cash, and keep it; get the reputation of being

a good collector, and keep it; get the reputation of being honest in your dealings with your customers, and keep it; get the reputation of taking an interest in the public affairs of the community in which you live, and keep it, and last, but not least, provide yourself with the latest catalogue of your great competitors, keep them on your desk and familiarize yourself with their contents, and when your customers spring catalogue house prices, be ready to combat their argument, using for your defence the weapons of our enemies. Our customers need to be educated to the fact that the largest part of the stock in trade of our enemies is goods of an inferior quality, such as job lots, seconds and goods of imperfect manufacture. While the descriptions of them may be perfect, the prices asked for them are much more than they are worth.

## FOREIGN TRADE INCREASING.

The Ontario Wind Engine & Pump Co.'s foreign trade is increasing. They are now preparing for shipment for Levant 10 complete Canadian air motor outfits, fitted with special drainage pumps. They are also preparing for shipment for Madras, India, a Canadian air motor for supplying two houses with water on similar lines used in Canada. Their English shipments are being made constantly, and it is gratifying to see Canadian goods establishing themselves in distant parts of the globe.



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 Morrison, Geo. D., Toronto.  
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 McGregor-Banwell Fence Co., Windsor,  
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 Merrick, Anderson & Co., Winnipeg.  
 Ononda Community Niagara Falls.  
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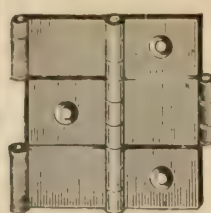
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**JONES & BARCLAY, BIRMINGHAM, ENG.**

## DAVISON'S MINIATURE TOOLS.

A perfect working model wrench, exact size of cut. Accurately proportioned and made exactly to scale. Handsomely nickel-plated. Sells on sight.  
\$2.00 per doz. Pearl Hand'e, \$3 00 doz.



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OUR SPECIALTIES ARE BRITISH AND FOREIGN IRON, STEEL, METALS, BARS, PLATES, SHEETS, BOLTS and NUTS, TIN PLATES, Etc.

Sole Licences for **PAGE'S PATENT WIRE STRETCHER**, and we are willing to sell the right of manufacture in Canada on a Royalty basis.

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We publish a "Canadian Metal Price List" monthly. Quotations in Dollars and Cents. (C.I.F.) We will send this, and our "Weekly Market Report" on receipt of address.

**IRONSIDE, SON & CO.,** 16 Water Lane, Gt. Tower St., E.C. **LONDON, ENG**

**CHAS. F. CLARK, President.**

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...ESTABLISHED 1849...

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The People Want

## WALKER'S SELF-PULLING

which draws the cork, cuts the wire, removes crown, seal and aluminum stopper. Does the whole thing. Each one tested and guaranteed. We manufacture over 50 different styles.

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Bars in Flats, Rounds, Squares,  
Ovals, Half-Ovals, Half-Rounds and  
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GOOD QUALITY. PROMPT SHIPMENT.

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## MEASURING TAPES

Steel, Metallic, Linen, Pocket, Ass Skin,  
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ARE THE BEST AND MOST POPULAR TAPES IN THE WORLD.  
YOUR STOCK IS NOT COMPLETE WITHOUT THEM.

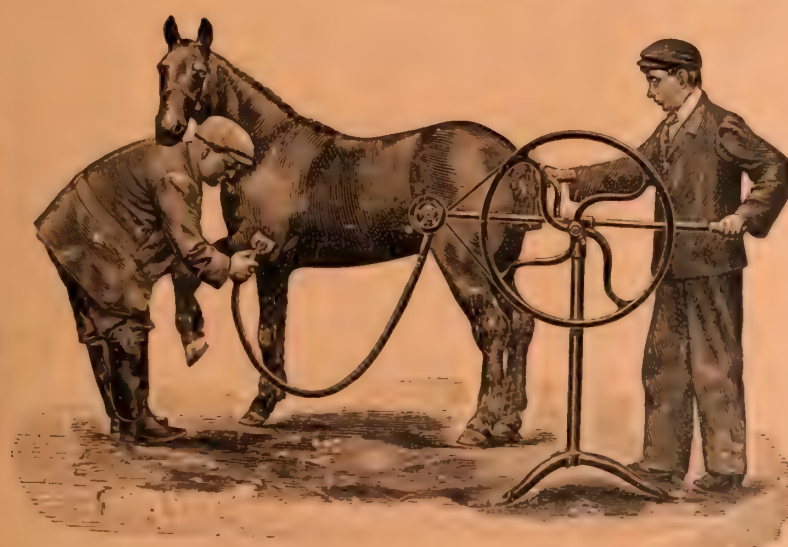
### LUFKIN RULE CO., Saginaw, Mich, U.S.A.

London Office and Warehouse—48 Lime St.      New York City Branch—290 Broadway.

For sale by ALL PROMINENT CANADIAN HARDWARE JOBBERS.

# BURMAN'S CELEBRATED CLIPPERS

Bown's "Newmarket."



THE KING  
OF  
CENTRE-  
ADJUSTMENT  
CLIPPERS  
STILL  
REMAINS  
UNSURPASSED  
AFTER  
A RUN OF  
NEARLY

## THIRTY YEARS

Patented 1874.



The Improved  
B PATTERN  
"NEWMARKET."

may now be obtained  
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DETACHABLE  
PLATES.

IMPROVED CAP  
WITH LONG BEAR-  
ING.

RIGIDITY and EASY  
RUNNING.

ACCURATELY  
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PERFECTLY  
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All Parts  
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**THE "NEWMARKET" POWER CLIPPER.**  
For excellence of design and superiority of workmanship, the  
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Manufactured solely by  
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**Black Diamond File Works**  
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Twelve  Medals

Awarded  
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## "Redstone" Sheet Packing.

For use in highest pressures for Steam, hot or cold Water and Air. Packs equally well for all. No trouble with leaky joints when they are packed with **"REDSTONE."** The most satisfactory packing on the market. Try a sample lot and be convinced of its merits.

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Write for prices from  
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**BETTER than  
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We aim at making  
 a line of leather belting  
 better than the ordinary  
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 convince you that we have  
 succeeded in our aim.

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# HARDWARE AND METAL

## AND CANADIAN MACHINIST

A Weekly Newspaper devoted to the Hardware, Metal, Machinery,  
Heating and Plumbing Trades in Canada.

VOL. XVI.

MONTREAL AND TORONTO, SEPTEMBER 10, 1904.

NO. 37

BUTCHERS' KNIVES  
**JOHN WILSONS**  
 CELEBRATED  
 "PEPPERCORN AND DIAMOND"  
 BRAND CUTLERY.  
 TRADE MARK  
 BUTCHERS' STEELS

Canadian Agents: DORKEN BROS. &amp; CO., Montreal

### Best Quality Steel Sheets.

"QUEEN'S HEAD" and  
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Flat, smooth, free from scale, best working  
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The large increase in the demand for Taylor-Forbes

## BUTTER WORKERS

is due to the fact that they are made from a  
 finer grade of wood. Only white wood is  
 used—a fact that dairy workers are quick to  
 appreciate. Then, too, the iron work on our  
 Butter Workers is of a superior quality—gray  
 iron. Japan finish.



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Two Irresistible Arguments

Order from your jobber.

Carried in stock, quick shipments.

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The Largest Manufacturers of Hardware in Canada.

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SEP 12 1904



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Out Book 23

Page 49

GET OUR  
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ON  
LOADED  
SHELLS



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SEP 12 1904

MARLIN TAKE DOWN RIFLES

RETURNED

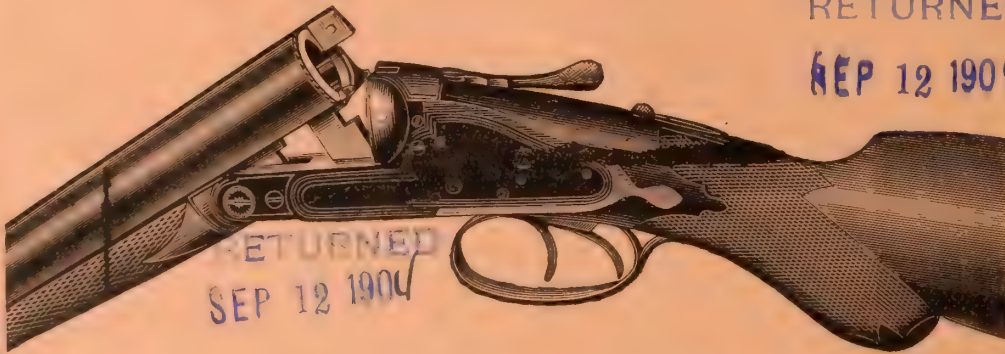


DUCK DECOYS

ASK  
FOR  
BLUE  
RIBBON  
POWDER

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MARLIN  
SAVAGE  
WINCHESTER RIFLES

AMERICAN  
AND ENGLISH SHOT GUNS

MARLIN  
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# RICE LEWIS & SON

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**ALWAYS  
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Full Hollow  
Ground \$2.50 Each  
Double Concave for  
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No Smarting after Shaving. With ordinary careful use will

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## The Canadian Rubber Co. of Montreal.

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**Rubber Belting,  
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We make a specialty of

**HORSE SHOE PADS**

the best in the market.

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**Lightning, Gem  
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Well Advertised.

High Demand.

Quickly Sold.

Factory in Use.

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Cedar Pails with Electric Welded Wire Hoops.

Cans of Heavy Tin with Drawn Steel Bottoms.

AUTOMATIC Twin Scrapers.

"The Ice Cream Freezer Book" tells all about  
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**EXCEL IN**

Easy Running.

Quick Freezing.

Economy.

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Practical Results.

**North Bros. Mfg. Co.,** Philadelphia, Pa.,  
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Wholesale Hardware Merchants

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The Central Canada Fair opens Sept. 16th and runs until Sept. 24th. We will be glad to have all attending Fair to visit our warehouse. Come and make it your headquarters. Hoping to see all our customers.

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In Stock.

Write for Prices.

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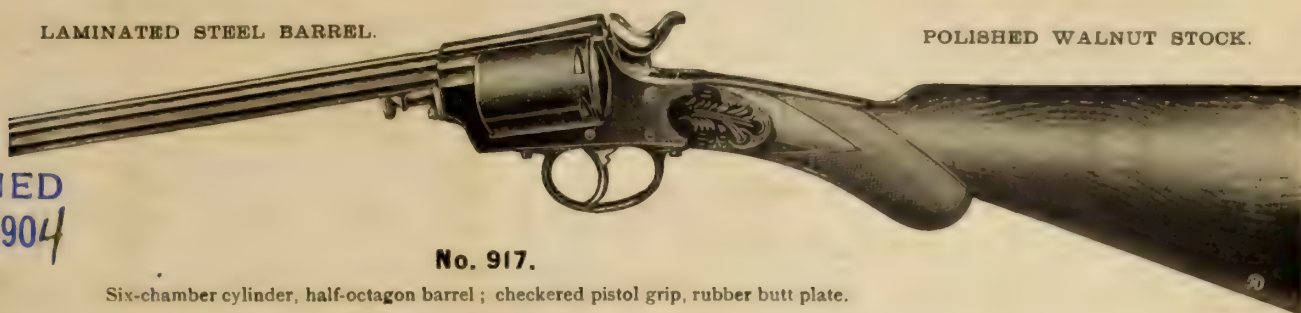
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TO our belated customers who are handing money into the air by not buying their Guns and Ammunition right, or perhaps not buying them at all, we wish to say that we were never in a better position to care for your wants in the Sporting Goods line. We mean in prices as well as prompt shipments. We would like you to have our latest Gun Catalog, because it is a valuable book and we are sure will be helpful to you in buying. If you have not received one we will send it to you upon receipt of the corner stub. A postal with your address will do as well.

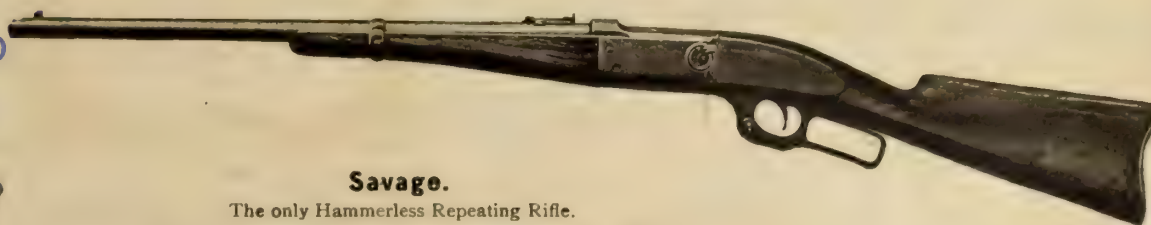
LAMINATED STEEL BARREL.

POLISHED WALNUT STOCK.



No. 917.

Six-chamber cylinder, half-octagon barrel; checkered pistol grip, rubber butt plate.

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Page 44.  
Cus

Savage.

The only Hammerless Repeating Rifle.  
Simple, Strong and Safe, yet Light, Durable and Accurate.

DAMASCUS BARRELS.

IMITATION EBONY STOCK.



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Bar Rebounding Locks, Metal Plated Frame and Hammers, Top Snap,  
Extension Rib, Diana Breech, Pistol Grip, Steel Butt Plate.RETURNED  
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No less than twenty-nine different kinds of Double-Barrel Shot Guns illustrated and described in Catalog No. 33.

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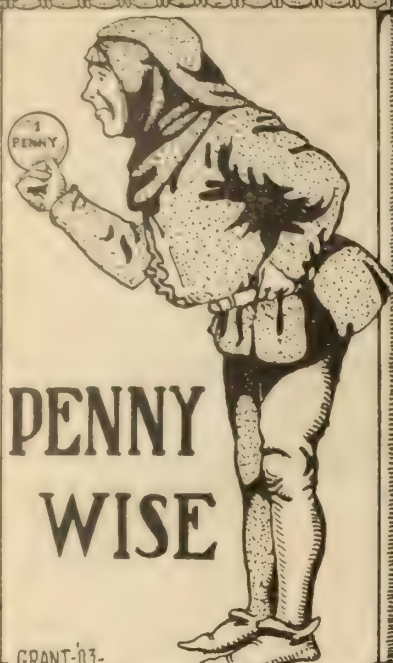
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LEWIS BROS. & CO., Montreal  
Please send Catalog No. 33 to





**PENNY WISE**

GRANT-03-

The only real value of money lies in making use of it.

The money that lies there in your safe from day to day doesn't do you any good until you commence to use it.

Then its value to you depends on how you use it.

Now, if you would only invest some of it in advertising space in **HARDWARE AND METAL**, and then use the space right you have a valuable assistant, working to increase your trade with hardwaremen and to make yourself and your goods better known among them.

Some folks would sooner save (?) the money—but they are "penny wise and pound foolish."

But you're not.  
Are you?



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Sharratt & Newth

43 and 44 Percival Street, - London, England

Contractors to H. M. Government and the Principal English Sheet and Plate Glass Works.

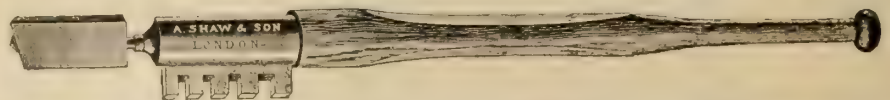
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ALSO  
Lead Vices,  
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Agents for Canada: **A. Ramsay & Son, Montreal**

**GLAZIERS' DIAMONDS**



Ahead of all others in quality and workmanship. If sparks of fine quality, set by experts, are what you require, buy Diamonds of A. Shaw & Son's make.

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**HAND FORGED CLAUSS BRAND. BEST MATERIAL**

The word **Clauss** stamped on an article means that it is good.



We warrant **Clauss** goods to be better than the best.  
Write for Catalogue and latest discounts.

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Canadian Agent. 169 Spadina Ave., Toronto, Ont.

**CELEBRATED HEINISCH SHEARS**

Tailors' Shears,  
Trimmers' Shears,  
Tinnern's Snips, etc.



ACKNOWLEDGED THE BEST.

**R. HEINISCH'S SONS CO.**

NEW YORK OFFICE, 155 Chambers St.  
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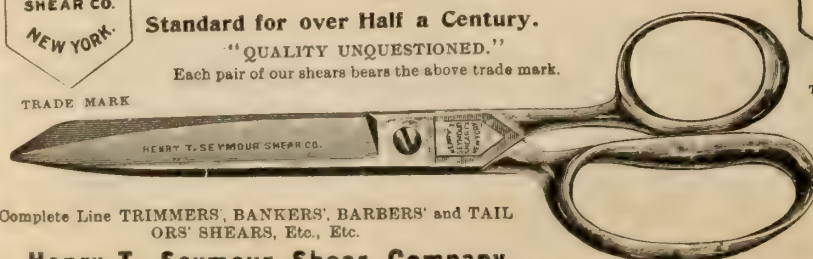
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Standard for over Half a Century.

"QUALITY UNQUESTIONED."

Each pair of our shears bears the above trade mark.

TRADE MARK



Complete Line TRIMMERS', BANKERS', BARBERS' and TAILORS' SHEARS, Etc., Etc.

**Henry T. Seymour Shear Company.**

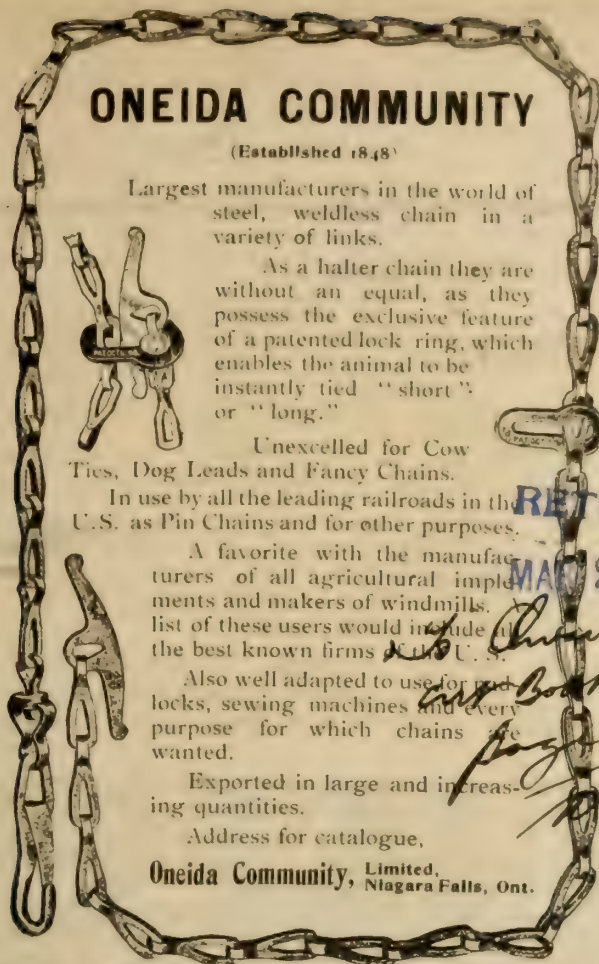
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Latest Catalogue will be sent in exchange for your business card.





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Largest manufacturers in the world of steel, weldless chain in a variety of links.

As a halter chain they are without an equal, as they possess the exclusive feature of a patented lock ring, which enables the animal to be instantly tied "short" or "long."

Unexcelled for Cow Ties, Dog Leads and Fancy Chains.

In use by all the leading railroads in the U.S. as Pin Chains and for other purposes.

A favorite with the manufacturers of all agricultural implements and makers of windmills. A list of these users would include the best known firms in the U.S.

Also well adapted to use for padlocks, sewing machines and every purpose for which chains are wanted.

Exported in large and increasing quantities.

Address for catalogue,  
Oneida Community, Limited,  
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Chas. B. R. 45  
Page 11  
D. S. 6*

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Absolutely Accurate and Reliable. The Best of Material and Workmanship. Recognized throughout Canada as

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We make scales of every description. Established 1856.  
Send for catalogue and printed matter.

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PATENT  
**COW  
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These Cow Ties have stood the test for years. Undoubtedly the best and strongest on the market.

It will pay to handle only the best.

A complete line of all sizes ready for shipment.

For Sale by all Jobbers.

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# STEEL WIRE NAILS

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A large quantity of  
STANDARD SIZES in Stock

**WOOD SCREWS,  
BRIGHT WIRE GOODS,  
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**WIRE** OF ALL KINDS  
AND  
FOR ALL PURPOSES.

**COPPER WIRE**

for  
TROLLEY - TELEGRAPH - TELEPHONE  
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TRANSMISSION LINES

Manufactured by

**DOMINION WIRE MFG. CO**  
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"Pullman"  
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IS YOUR  
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Manufacturers of **FLATWARE, CUTLERY and  
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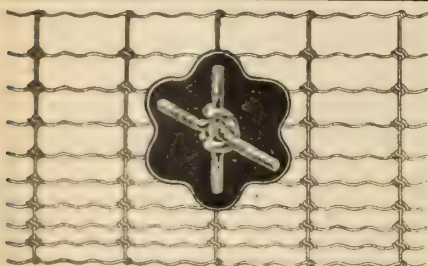
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**We Make Stencils**

Stencils for shippers are a great saving  
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**THE PARSONS-IRONS CO.**

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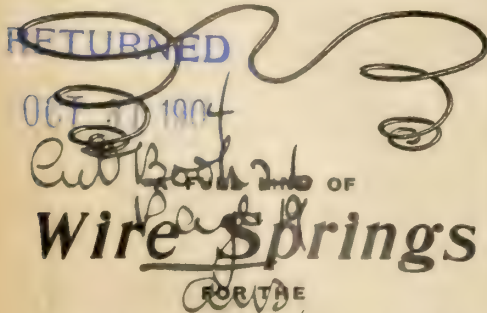
Is Strong and Durable, because Large Gauge (No. 9) Steel  
Galvanized Wire is used throughout. SEE OUR EXHIBIT  
AT PRINCIPAL FAIRS, or write for Catalog.

Write for Catalogue.

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Sole agents for Man. and N.W.T.



**Wire Springs**

FOR THE

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**JAS. STEELE, Guelph, Ont.**

A SAMPLE ORDER SOLICITED.



This design a guar-  
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**WATERPROOF WRAPPING PAPER**

For Express and Long Distance Packages. Put up in rolls 36 in. wide, 250 and 300 yards  
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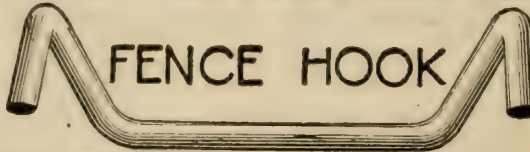
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WIRE NAILS, COILED SPRING,  
BARB and PLAIN FENCE WIRE,  
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LINE WIRE, STAPLES, etc.

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**RAT AND MOUSE TRAPS**

STRONGEST TRAPS MADE. PRICES EXACTLY RIGHT.

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**SPRINGS**

**FLAT.—SPIRAL OR VOLUTE**

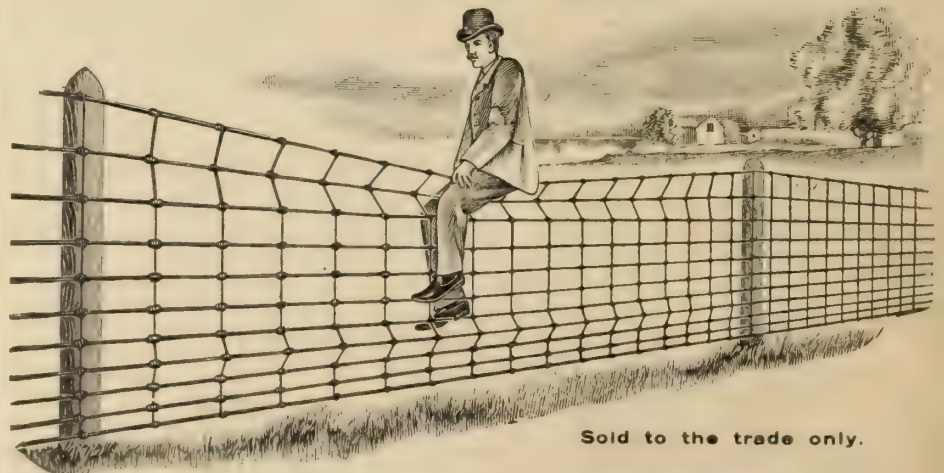
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**DILLON FENCING**

THE HINGE IS COMPLETE, AND  
WORKS WITH THE UTMOST  
FREEDOM.



Sold to the trade only.

CAVERHILL, LEARMONT & CO., Agents  
at Montreal and Winnipeg

Manufactured and sold by  
**OWEN SOUND WIRE FENCE CO., Limited**  
Owen Sound, Ont.



**C**ordage  
**O**f every description.  
**N**et Mountings,  
**S**and Line,  
**U**noiled Cordage,  
**M**arline,  
**E**xtra Long Lengths,  
**R**atline,  
**S**hingle Yarn.

**C**ore Rope,  
**O**il Well Cables,  
**R**ussian Packing,  
**D**eeper Sea Lines,  
**A**ncor Line,  
**G**ood Transmission Rope,  
**E**ngine Packing.

**C**lothes Lines,  
**O**nly Best Material Used.

**L**og Line

**T**wine.

**D**angerous to use Inferior Cordage.

**M**ail  
**O**rders  
**N**ow  
**T**o us and  
**R**ecieve  
**E**xceptional  
**A**ttention.  
**L**ow-priced goods are not always  
the cheapest.



# TRUE BRAND CUTLERY



POCKET CUTLERY, RAZORS, SCISSORS,

QUALITY GUARANTEED

BEST GOODS

RIGHT PRICES

E. F. WALTER & CO., 166 and 168 McGill St., Montreal

PRICE is a good thing,—but,  
QUALITY is better.

Wilcox Door Hangers Combine Both.

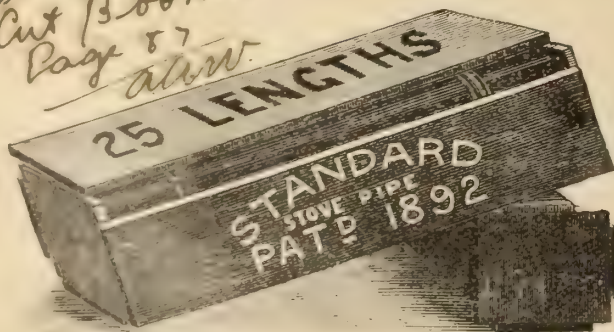
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Wilcox Mfg. Co. of Ontario, Limited  
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## Kemp's Standard Stove Pipe { Nestable }

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JUL 15 1905

To Owner  
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Page 87  
allw.



Easily put together, requiring neither rivets nor tools  
Uniform in size, securing a perfect fit.

RETURNED  
OCT 22 1904

Cut Book 25  
Page 71  
Cnd.



We carry in stock a full line of metals, comprising Canada Plate, Galvanized Iron and Black Sheets, also Tinplate, etc., which we are at all times prepared to supply at lowest market prices.

KEMP MANUFACTURING CO., TORONTO, Canada



## THE OPENING OF THE SHERWIN-WILLIAMS WORKS AT MONTREAL

A LARGE number of invited guests, including some of Canada's most distinguished and representative citizens, were present on Tuesday at the formal opening of the mammoth plant of the Sherwin-Williams Co., in Montreal. As most readers of Hardware and Metal are aware, this progressive company have been engaged for some time in the erection of a large modern plant, fully the equal in point of equipment of any of their plants in any part of the world.

The new factory, which is situated at 639 Centre street, Montreal, is one of which the company may justly be proud, and it was the admiration of the guests on Tuesday when over an hour was

as it is a model of economy in operation. It is equipped with two Corliss engines, one of 130 horse power, the other 200 horse power. These drive two Westinghouse alternating generators, one of 75 kilowatts, the other of 120 kilowatts, furnishing electrical power for the whole plant. The factory throughout is equipped with the most modern and approved machinery, electrically driven, each department having its own motor. Hydraulic lifts and general labor saving devices are installed throughout the entire plant.

A feature of the power facilities is the pumping station, which is employed for pumping the various liquids used in paints and varnishes from a central station direct to each department.

Across the way on Atwater avenue is the varnish factory, connected by a bridge with the main plant, and it also is a model of modern construction. The guests were informed that many of the varnish appliances and methods employed by the Sherwin-Williams Co. are original with them. Immense storage capacities enable them to allow their varnishes to mature thoroughly before being sent out.

The comfort of the employes is well provided for. In the first place they are given a sanitary, well-lighted factory in which to work. Then there is a lunch room where a substantial bill of fare, changed daily, is served at cost prices. A reading and recreation room, supplied with magazines and games, a "rest room" for women employes, are other features of a general plan which tends to a perfect understanding between management and workmen.

### THE LUNCHEON.

When more than an hour had been pleasantly spent in the inspection of the plant, guests and employes sat down to a luncheon served in the lunch room of the factory. C. C. Ballantyne, the Canadian manager, presided, and near him were seated H. A. Sherwin, the president of the company; W. H. Cottingham, vice-president and general manager of the company; Hon. Raymond Prefontaine, Minister of Marine and Fisheries; F. D. Monk, K. C., M. P.; Mayor Laporte; Geo. E. Drummond, president of Montreal Board of Trade and of Canadian Manufacturers' Association, Hon. Issa Tanimura, Commissioner of Commerce and Finance, Tokio, Japan; L. A.

Rivet, M. P.; J. J. McGill, president of Montreal branch of Canadian Manufacturers' Association; W. B. Allright, New York, manager of railway department of the company; J. C. Beardslee, Cleveland, general superintendent of the company; E. M. Richardson, New York, manager of the company's marine department.

C. C. BALLANTYNE.

When justice had been done to the array of good things and the healths of the King and the President of the United States had been drunk, Chairman Ballantyne in a brief address sketched the history of the company in Canada from its small beginnings in 1887 to its commanding position in 1904. This growth was typical of the development of Canada, and as a Canadian he was



WALTER H. COTTINGHAM  
General Manager of The Sherwin-Williams Co.,  
Cleveland.

proud of it. Mr. Ballantyne referred to the ramifications of the company's business in all parts of the world, claiming for it that it is truly cosmopolitan and knows no flag in business.

H. A. SHERWIN.

President Sherwin, who was greeted with enthusiastic applause, spoke briefly. He had not expected the pleasure of meeting so many guests, and had prepared his remarks for the benefit of the employes. The president referred to the prominent positions held in the company's service in different parts of



C. C. BALLANTYNE  
Canadian Manager of The Sherwin-Williams Co.,  
Montreal.

pleasantly occupied in inspecting it. The buildings comprise a four storey office and warehouse, with a frontage of 280 feet and a depth of 50 feet; a paint factory immediately in the rear of the office and warehouse building, four stories high, 220 feet long by 50 feet deep; a modern power house and pumping station 103 feet long and 72 feet deep; and a varnish factory across the street, connected by a bridge with the paint factory.

The power house was of particular interest to the manufacturers in the party



the world. With the success of Messrs Cottingham and Ballantyne all were familiar, but many important posts in other parts of the continent and in Europe were held by Canadians.

The Canadian division has a task before it, for to be a complete success this large plant must be run to its limit. He hoped it would soon be too small. It had always been the company's policy to make paramount the interests of the consumer of its products, and in this they required the aid of each individual employee. They were building for permanent success.

W. H. COTTINGHAM.

W. H. Cottingham, vice-president and general manager, referred to the opening as a house warming of the company's new business home. Old employees would appreciate his feelings on this occasion: it was their loyalty and enthusiasm which had made this plant possible. It had been said that the first requisite for war was money, the second was money and the third money. In like manner the first requisite for

assistance of C. C. Ballantyne the business prospered until in 1890 the Sherwin-Williams Co. and the Walter H. Cottingham Co. were consolidated. In an eloquent peroration Mr. Cottingham expressed his hopes for the future of the company in Canada—a country just awakening to her magnificent possibilities.

HON. RAYMOND PREFONTAINE.

Hon. Mr. Prefontaine in a brief speech said he had come to see whether the Government had been getting the right paint for those lighthouses on the St. Lawrence which were being painted red—a sign of the elections—as some prophetic scribes asserted. He was glad to see American capital invested in a great Canadian industry.

F. D. MONK, K. C., M. P.

Mr. Monk in a humorous and eloquent address said that he had been amazed to see the progress made in paint manufacturing. When Mr. Richardson was showing him all the wonderful machinery he wondered whether it would be impossible to devise an automatic way



A View of The Sherwin-Williams Works While Under Construction.

success in business was men, the second men, and the third men. In the building up of the great Sherwin-Williams business the human element had been the most important factor.

In a brilliant humorous address, Mr. Cottingham sketched the development of the business in Canada since its beginning in 1887, when he himself, with a French-Canadian boy of 12 years of age, had commenced business at 56 St. Peter street, Montreal, styling himself "merchant and manufacturer." In those days he made gold paint and printers' roller composition, and sold bronze powders and clothes pins. The business grew rapidly from such small beginnings, and Robert Johnston, a capable salesman, went west and sent in orders for car loads which the firm could not fill. Mr. Cottingham humorously described his difficulties when a customer from the far west announced that he was coming to see the plant. With the

of getting over the elections, which are still run by hand and mouth.

He was glad to see the loyalty and enthusiasm of the employees. In this institution was exemplified the right solution of the problems of capital and labor.

OTHER SPEAKERS.

Mayor Laporte, Geo. E. Drummond and Hon. Issa Tanimura spoke briefly. The last named received a tumultuous welcome, which bore testimony to the popularity of his native Japan.

#### CHINESE THRIFT.

The rubbish heaps in the streets of Chinese cities are carefully picked over by sharp-sighted scavengers. One of the greatest prizes to be found is a whole empty bottle; while broken pieces of glass are eagerly looked for, to be reheated and made into lamps and "antiques."

#### CATALOGUES, BOOKLETS, ETC.

For the convenience of its readers **HARDWARE AND METAL** has opened its columns for the review of catalogues, booklets or other such publications issued by manufacturers or wholesale dealers selling to the hardware, plumbing, machinery or metal trades. Retailers desiring such publications may also have inserted a note to that effect. It is requested that when any of the trade write for any booklet mentioned in these columns that they credit **HARDWARE AND METAL** as the source of their information.

#### Tool Catalogue.

**T**HE tool department catalogue of the James Smart Mfg. Co., Limited, Brockville, Ont., is a handsome one, being of standard size, 9 x 6 inches. It contains 52 pages descriptive of hammers, hatchets, sledges and axes manufactured by the firm. It is very handsomely illustrated and is well indexed. The hammers described and illustrated include nail hammers, tack hammers, tinners' hammers, farmers' hammers, machinists' hammers, blacksmiths' sledges, staking and drilling hammers, masons' hammers, mauls and wedges. The hatchets illustrated include: Hunters' axes, shingling hatchets, lathing hatchets, claw hatchets, barrelling hatchets. Among the axes are described and illustrated chopping axes, joiners' and framing axes.

#### Magnolia Metal Co.

The Magnolia Metal Co., 113-115 Bank street, New York, are sending out a new catalogue describing their anti-friction metal, magnolia. It contains records of tests made with magnolia metal, in which this metal made surprising showings. It also contains some testimonials from users of the metal for bearings. Illustrations of the interior of the offices in New York are given.

#### Micrometer Calipers.

J. T. Slocomb & Co., manufacturers of machinists' tools, Providence, R.I., have issued catalogue No. 11, describing and illustrating micrometer calipers, giving price lists. This business was established in 1891 by J. T. Slocomb and C. E. Barlow, both practical machinists. The calipers are especially designed for ma-

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chinists' work. Besides the standard forms of micrometer calipers there are illustrated and described the ball ratchet stop, which can be applied to all micrometers, micrometer heads, morocco cases, micrometer sets, standard end measures, micrometer gauges, centering drills and devices.

In these micrometers the adjustment between the measuring screw and its nut is provided for by drawing the spindle back in line with its axis, which keeps all threads in contact and does not shorten the length of wearing surface. The spring in these calipers causes a slight uniform friction on the spindle, so that it is never loose at any point and will not move around of its own accord.

#### Water Tube Boilers.

The W. D. McNaul Co., Toledo, Ohio, are sending out a handsome catalogue, standard size, 9 x 6 inches, and 50 pages, illustrating and describing the McNaul economic safety water tube boilers, patented and manufactured by them. These boilers are made in the vertical and horizontal forms. The illustrations are very clear and include the horizontal boiler and its principal parts, the vertical boiler, the horizontal boiler and superheater and buildings and factories in which these boilers are installed.

Class A of these boilers has one or more horizontal steam and water drums, the number depending on the size of the boiler. The tops of the headers are concaved to receive the drums, and the drums and headers are connected together with short tubes or nipples, extending radially with reference to the centre of the drum, and the holes in the top of the header are placed in the same radial lines with the holes in the drum. Into these holes in the drum and header are expanded short, cold drawn, seamless, heavy gauge tubes and nipples, which in this radial position brace each other.

#### E. F. Reece Co.

Catalogue No. 5 of the E. F. Reece Co., Greenfield, Mass., is the latest general catalogue and price list of their screw cutting tools, including taps, dies, screw plates, etc. The catalogue is a handy size for reference.

The "Reece" patent dies are not solid but are cut through on one side and a screw inserted through the edge of one half, by means of which the die is immediately opened and closed. The screw plate is provided with an adjustable guide by means of which the screws are cut per-

## Increase Your Paint Business This Fall

We have a plan to help you increase your paint business. Our plans have been successful in the past—this one beats them all. The fall is the best time for good painting—we are making it a time for good paint selling. If you are an S.W.P. agent read the September issue of our magazine, *THE S. W. P.*—it gives the remedy for slack fall paint trade. If you are not an S.W.P. agent, it will pay you to write to us to-day for full information concerning *The Sherwin-Williams Agency Plan.*

**A NOTE TO S.W.P. AGENTS**  
Sell Sherwin Williams Enamel to the painter. For inside gloss finishing at reasonable price with good profit. It insures better results than can be obtained from "hand mixed" high gloss paint.





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1225

fectly true. The jaws of the guide are operated by means of a cam, which is moved in one direction to close upon the iron and in the other to release it.

#### Foos Gasoline Engines.

Catalogue No. 14 of the Foos Gas Engine Co., Springfield, O., illustrates and describes the Foos gas and gasoline engines. Accompanying the catalogue is a large handsome engraving of one of their engines, and on the opposite side an engraving of their plant; also testimonial letters regarding the efficiency of the Foos gasoline engines. This engine is of the four cycle type. The igniter on these engines is of a patent wipe spark type, the revolving electrode blade wiping the edge of the stationary electrode spring, preventing all corrosion, scale or dirt from accumulating on the contact points. The inlet and exhaust valves are of the verticle poppet type, both positive in their

action. The governor is of geared, centrifugal, fly-ball type. The valve gear is simple and easily adjusted for all wear. The principal working parts are assembled on one side, thus making them easily accessible.

#### Power Presses.

Catalogues have been received from E. W. Bliss Co., New York, describing their different power presses, of which they manufacture a large variety. They also issue a handy little book of information valuable to machinists and manufacturers, containing considerable technical data. Any of these may be had on application, mentioning *Hardware and Metal.*

#### Pressure and Vacuum Gauges.

The Bristol Co., Waterbury, Conn., are sending out catalogue No. 13, illustrating and describing the Bristol recording pressure and vacuum gauges. The



catalogue contains: Description of gauges for total range of six pounds per square inch and over; description of gauges for low ranges of pressure; description of combination vacuum and pressure gauges; description of round recording pressure gauges; list prices of all the different kinds of gauges; pressure and vacuum charts; combination gauge charts; vertical file chart cabinet; carrying cases for gauges; recording instrument ink and testimonials.

#### Metallic Packing.

The United States Metallic Packing Co., Philadelphia, Pa., are sending out a small booklet descriptive of their metallic packing. It is very neat in design. This firm make a specialty of packing valve stems and piston rods on steam engines. One of the chief claims made for this packing is its flexibility.

#### Business Changes

##### ONTARIO.

THE dry kiln of The Rat Portage Lumber Co., Rat Portage, has been burned.

Wm. P. Matthews, harness maker, Aylmer, has sold to W. Buchanan.

F. W. Karn, hardware dealer, Woodstock, sustained loss by fire; insured.

Malcolm McIntyre, blacksmith, Alvinston, has advertised business for sale.

J. E. Taylor, blacksmith, Watson's Corners, has succeeded Patrick Fife.

C. J. Stabback, general merchant, Columbus, has sold to Harvey Hoar.

The assets of J. E. Langlois, general merchant, The Brooke, were to be sold on the 8th inst.

Evariste Tetrault, general merchant, Acton, has been succeeded by M. St. Pierre.

##### QUEBEC.

Telephore Filion and Joseph Chenail, blacksmiths, La Colle, have registered.

Samuel M. Lube has registered under the style of The Aborine Mfg. Co., Montreal.

Bertha C. Cowan has registered under the style of Amos Cowan & Co., builders, etc., Montreal.

P. Dansereau & Cie., axle manufacturers, Montreal, have dissolved.

Eugene Monette, jr., has registered under the style of J. E. Monetin, general merchant, St. Philippe de La Prairie.



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**IVER JOHNSON'S ARMS & CYCLE WORKS,**

FITCHBURG, MASS.

A meeting to appoint a curator to S. E. Adam, general merchant and lumber dealer, Disraeli, is called for the 12th inst.

##### MANITOBA AND NORTHWEST.

F. E. Stevens, hardware dealer, Balcarres, has sold to H. E. Chaplin.

Cheney Bros., hardware dealers, Lyleton, have dissolved.

Charles Aimes, dealer in agricultural implements, Emerson, sustained loss by fire.

W. J. Scarth, harness maker, Emerson, sustained loss by fire.

Wm. Templeton, blacksmith, Emerson, sustained loss by fire.

John Tedford, blacksmith, Minnedosa, has sold to John Gillies.

E. W. Stone, late general merchant, Carstairs, is dead.

Naimen & Kliman, general merchants, Chortity have dissolved.

A. McNabb, general merchant, Osage, has been succeeded by O. K. Ekert.

W. M. Rabe, general merchant, Indian Head, has advertised business for sale.

Asp & Otteson, general merchants,

Wetaskiwin, have been succeeded by Otteson & Fealand.

The stock of McLeod & Bailey (estate of) general merchants, Elkhorn, has been sold to Finkstein & Kliman.

#### TRADE NOTES.

His many friends will be sorry to learn that Mr. Charles Brown has resigned his position with Mr. James Whitten and intends going to Magnewan, where he has purchased a hardware business. Mr. Brown has been an obliging salesman and an exceedingly good citizen and while regretting his departure, everyone will wish him abundant success in his new venture, which he will undoubtedly have.—Bracebridge Gazette.

The hardware store of W. Karn, Woodstock, Ont., has been destroyed by fire. An explosion of oil in the basement caused the fire.

The hardware firm of Black & Conelly, Gladstone, Man., has been changed to Black & Buck.



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## Stevens' Pistol

### Stevens' "Tip-Up"

Rim Fire

No. 41. 22 Calibre.

RETURNED

SEP 12 1904

Cut Book 23  
Page 46  
Q10

Iver-Johnson

Double Action  
Revolvers

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### Stevens' "Diamond"

Rim Fire

No. 43. 22 Calibre.

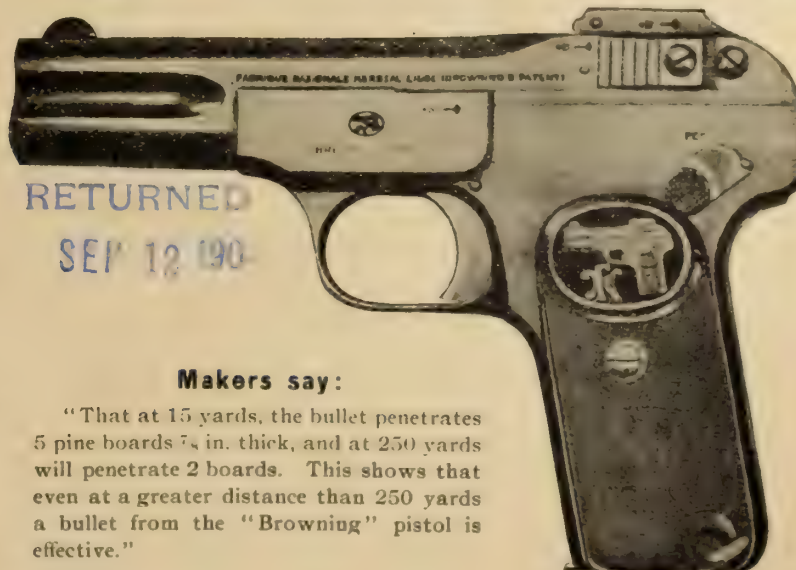
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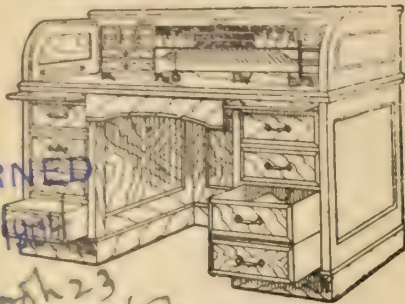
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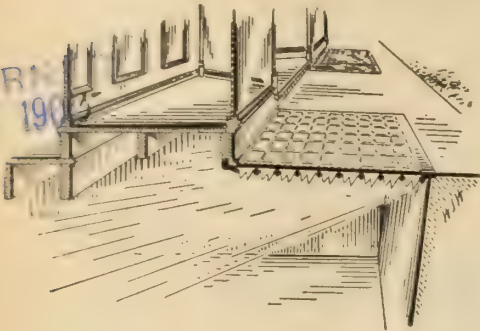
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**The Office Specialty Mfg. Co.**

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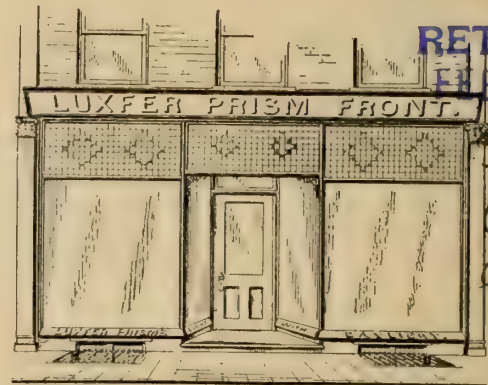
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Burns with a clear white flame; is perfectly odorless and throws an intense heat.

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### New Advertisements:

Algoma Steel Co.

## A DANGEROUS PRECEDENT.

LAST Saturday several Canadian newspapers contained the display advertisement of the Alberta Central Land Corporation, Limited, offering for sale 120,000 acres of farm lands in Alberta. This company has recently been incorporated with a board of directors including among the rest George H. Gooderham, E. F. B. Johnston and Mr. Justice Britton, of Toronto.

It is much to be regretted that the last-named gentleman has seen fit to become a director of such a purely speculative concern as the Alberta Central Land Corporation, Limited. The dignity of the bench and the nature of the oath of office should have been of sufficient weight to have deterred him from taking such a step.

The Canadian judiciary is by no means so perfect but that it might be improved upon and the alliance of Mr. Justice Britton with a speculative land company is a retrograde movement which, harmless as it may appear on the surface,

yet establishes a dangerous precedent. It must be understood once for all that no judge can with impunity accept a position on the directorate of a speculative company. The risk is too great.

It becomes the duty of Mr. Justice Britton to withdraw himself from an equivocal position and take up his stand for the dignity of the bench. As it is he can do so without loss of prestige. Later on it may become more difficult.

There lies in this incident a lesson, which the whole Canadian people would do well to take to heart. There is every reason to believe that the temptation placed before our judges to participate in speculative enterprises is greatly increased by the difficulty which the judges experience in living, in conformity with the dignity of their positions, on the meagre salaries paid them. So inadequate are these salaries that they almost afford a justification for the judges embarking on enterprises which would augment their incomes.

For some months now Hardware and Metal has been campaigning in favor of increasing the salaries of Canadian judges, and one of the strongest arguments which was brought forward, was the very one relating to the danger of the judges compromising their independence. The proximity of such a danger was scarcely dreamed of, yet it was right at hand. The sooner that the judges receive a competent salary, the better will it be for all concerned. Then there can be no excuse for a judge debasing the dignity of the bench in order to augment his income and there need be no fear that justice will be diverted.

## HOW TO INCREASE CANADIAN TRADE.

THE Department of Trade and Commerce, Ottawa, has undertaken an important campaign in the interests of Canadian trade and is including in its weekly report special hints to Canadian manufacturers desirous of building up an export trade in the various foreign countries covered by the commercial agents of the Dominion Government. Within the last few years Canada has awakened to a realization of the splendid opportunities for trade in certain foreign markets, especially the various sea-girt colonies of the British Empire, and while in some instances Canadian

trade has already become firmly established, the Government has shown admirable foresight in distributing capable commercial agents wherever there is a possible trade opening. There is more truth than poetry in the statement that if Canada wants trade she must go out after it. She has now taken the all-important step, and it rests entirely with herself to pave the way to successful competition for a fair share of trade in the various newly discovered markets.

As an instance of the valuable prospective work already accomplished along these lines, the latest report of Mr. Alex. MacLean, newly appointed agent to Japan, is interesting. Foreigners have long been casting anxious glances at the Japanese market as offering an excellent opening for foodstuffs. United States exporters were early in the field and as a result they have had a lion's share of the spoils. Canadian millers are strongly impressed with the idea that they can cater to the Japanese trade quite as well as their American cousins and are making an ambitious bid for that market. Mr. MacLean's report is especially valuable as showing the requirements of the Japanese trade as well as the trade conditions prevailing there.

The commercial agents in Australasia J. S. Larke and D. H. Ross, have done particularly effective work, not only in giving hints to Canadian exporters as to the commodities most in demand, but in correcting false impressions concerning freight regulations and offering timely suggestions towards an improvement in the present method of carrying on the export trade.

The same remarks apply to the agents scattered all over the United Kingdom and Europe.

## A CASE OF INADEQUATE PROTECTION.

A GENTLEMAN who until recently was carrying on business in Western Ontario is looking for a situation. A short time ago he was burned out, and as he had not taken proper precautions in regard to insurance he is now in his present predicament.

This is not a new experience. Those who watch the fire losses closely will have, no doubt, noticed the frequency with which little or no insurance is car-



ried by business men who are unfortunate enough to be burned out.

Insurance against fire is as much a part of a man's business as window dressing, bookkeeping, advertising, etc. When merchants are negligent in this respect, and either do not carry sufficient insurance, or as in some instances, none at all, they are following a practice which is as unbusinesslike as it is unwise.

### FUTURE ILLUMINATION.

THE problem of illumination is of more than passing interest to every merchant throughout the length and breadth of the land. While the subject of artificial light has at all times been an important one to every class and condition of mankind, yet in its relation to the progressive storekeeper, to whom the attractive window display has come to mean so much, it is of peculiar significance. Although a wide gulf has been crossed from the red glare of the pine torch of the savage, showing up the surrounding trees in uncertain form, to the steady white light of the enclosed electric arc, which brings out surrounding objects clearly and distinctly, there is still much to be done in this direction.

As far as economy goes, the electric light, which marks the farthest approach in that direction, is still extremely wasteful, over 95 per cent. of the energy consumed going out as heat. The question of economy, however, is not the only one to be considered, for the light of the future must imitate daylight much more closely than those now universally used. On entering a store lighted by rows of lamps, the source of light is at once forced upon a person, and he cannot help seeing the spots of light, as they might be called, which by no means add to his comfort. The more diffused the light given out, the more nearly does it approach the ideal condition. An incandescent gas or electric light placed here and there lights the store and shows where things are, yet, as the pine torch is to the incandescent lamp, so also is the latter to the light that we are bound to have in the very near future, which is now being perfected in the vacuum tube and

at present exemplified in the mercury vapor arc.

Experiments are now being made with vacuum tubes, lighted by electric excitation, that give every promise of a revolution in this direction in the near future. Tubes have been made and used that are over 150 feet long, giving out a soft white light throughout their entire length. One of these placed around the walls of a room at the ceiling would give a light more nearly approximating to nature than anything heretofore used, while the efficiency is also many times that of the ordinary electric lamp. It is to be hoped that the full perfection of these tubes will not be long delayed, and when they are placed on the market, as they are bound to, at no distant date, they will no doubt meet with the same hearty reception accorded the incandescent lamp a quarter of a century ago.

### BUSINESS MEN AND ELECTIONS.

A GENERAL election is evidently not very far away. The political organs are already beginning to play afresh the tunes that did service in the past, and the politicians are busy getting into condition for the fray.

As far as the business interests of the country are concerned it matters little which of the two parties are in power. The only difference between them is in name, and that is not vital.

But while it does not matter to the commercial interests of the country which party is in power, it does matter a great deal what manner of men compose the respective parties.

Worth, unfortunately, is not always the determining factor in the selection of representatives, either at the party nominations or at the polling booth. Those who have ever had a glance at the inside working of the party machine scarcely need to be reminded of this. But business men need to be put on their guard against it. And if they want good government they must be on their guard against it.

A well-known politician told the truth when he declared that elections are not won by prayer. They are, however, often won by preying upon the susceptibilities of the passive electorate. Ob-

viously the results which are obtained from such election methods are not conducive to the commercial welfare of the country. It is within the power of business men to minimize this evil. And the first step is to refuse to support the incapable men that the political heeler has set up. Get business men into line and support them.

### BELGIAN GLASS SITUATION.

IT was mentioned in Hardware and Metal last week that the glass situation in Belgium had assumed a serious aspect due to the unsettled condition of affairs in glass centres there. There had been a disagreement for some time between the glass workers and their employers. As the result of this the men had been given until September 1st to come to the terms of the manufacturers. When the day arrived no agreement had been reached, consequently all the glass factories in that country have been shut down.

The effect of this will be felt in a striking manner by the glass trade in Canada, as a large part of our glass imports are of Belgian manufacture. Already the primary market has increased considerably, and a sharp advance may be looked for in this country in the very near future. No Fall glass import consignments have yet been received, and there is every likelihood of a scarcity of glass during the coming Winter.

### HIGH SPEED STEEL TEST.

THE far-reaching importance attached to this branch of metal manufacture is manifested in the fact that at the World's Fair exhaustive tests are to be made regarding the merits, or demerits, of the different brands of tool steel. A representative commission of three judges is to act, one chosen by the steel men, one by the railroad men, and a third by these two. As the steel is to be forged, tempered and ground in the building, the test cannot be otherwise than a fair one. This is a unique event, and will be watched with the greatest interest by all concerned. Not only will the result be interesting, but the data accumulated will be of intrinsic value to all metal workers throughout the country.



## NEW CUSTOMS REGULATIONS.

**C** OPIES of the memorandum issued to collectors of customs by the Commissioner of Customs, on August 20, have come to hand. The memorandum reads:

To Collectors of Customs:

Instructions regarding Duplicate Invoices, Invoice Forms and New Certificates and Declarations on Invoices; and also regarding Revised Oaths on Bills of Entry (in force October 1st, 1904).

(1.) Copies of the Orders in Council of this date in relation to duplicate invoices, new certificates and declarations on invoices, and in regard to changes in the oaths on custom bills of entry are appended hereto with instructions for the guidance of customs officers and others concerned.

(2.) Take notice that the new forms come into effect on October 1st, 1904.

Collectors may, however, for a temporary period (not later than December 31, 1904) accept entries on invoices bearing certificate "J" or declaration form "6," in cases where it appears impracticable for the importer to furnish an invoice as prescribed with certificate form "M" or declaration form "N," but in such cases collectors will require that invoices of goods subject to specific duty shall also bear certificate form "J" when not certified on the new form "M."

(3.) Duplicate invoices are required to be delivered with bills of entry from 1st October, 1904. Provided, however, that a copy of the original certified invoice, if compared and initialed "true copy" by the customs officer, may be accepted as the duplicate invoice.

The duplicate invoice shall in all cases be annexed to the bill of entry and the rate of duty as on the entry shall be noted on both invoices beside the figures for the totals entered.

The customs officer at the port of entry who checks the entry with the invoice, shall initial the ratings on both invoices.

Both invoices shall also bear the entry number.

One copy of the bill of entry with the invoice (or copy) annexed thereto shall be forwarded by the collector to the commissioner of customs, Ottawa, in envelope A.

(4.) In respect of postal or express parcels containing donations or goods not being merchandise for sale, valued at not more than \$25, the collector may dispense with the requirements for an invoice when it is impracticable to produce such invoice. The goods to be appraised by the customs officer in such cases.

(5.) Collectors may accept invoices for the entry of free goods (except wire rods) without certificate form "M" thereon.

(6.) The forms of invoices in the appendix hereto marked (1—M) and (2—N) are approved.

(7.) The oath, form 2 as revised, only applies to the entry of goods exported to Canada on consignment without sale by the exporter prior to shipment.

Collectors may permit oath form 1 (revised) to be taken by the consignee as agent for the owner if the purchaser's true invoice be delivered with the bill of entry, in cases where goods sold by the exporter prior to shipment are consigned to a person other than the owner in Canada.

Such consignee may also be permitted to include on the same entry in con-

### TECHNICAL BOOKS.

Every reader of this paper should read the standard technical books relating to the trade or business he is engaged in. We, in recognition of this need, have completed arrangements for selling in Canada some of the best works published in the world. Read the list advertised in this issue. If any book you want is not there write for it to

Book Department,  
Hardware and Metal and Canadian Machinist, 10 Front street east, Toronto.

secutive order, goods described in several invoices for different owners, when arriving in one combined package.

(8.) Collectors may permit old entry forms to be used temporarily in necessary cases for a short period after 1st October, 1904, but not later than December 31, 1904, provided that paragraph 12 of the revised oath No. 1 be written and attested to on the entry when the old form oath No. 1 is used, and that paragraph 12 of the revised oath No. 2 be written and attested to on the entry when the old form of oath No. 2 is used.

(9.) Note particularly that the certificate form "M" takes the place of the old certificate form "J" on all goods sold prior to shipment to Canada (from 1st October, 1904);

Also that declaration form "N" takes the place of the old declaration form "6" (which is repealed from 1st October, 1904) on invoices of goods shipped on consignment.

A new circular for information of exporters, together with specimen of invoice (1—M), is being issued by the department.

It is desired that the new invoice forms be furnished by exporters for customs entries after 1st October, 1904, unless temporarily dispensed with by collectors, in exceptional instances, up to 31st December, 1904.

JOHN McDONALD,

Commissioner of Customs.

### THE VALUE OF A CATALOGUE.

**I** T is doubtful whether the full value of a catalogue is realized by one half of retailers, wholesalers or manufacturers receiving them. A good many regard a catalogue as valueless because it costs them nothing. A catalogue is of value, and if its value is recognized by the recipient the sender is well paid for his expense.

This is a time of progress, and those who wish to succeed must keep up with the times. New things are ever being put upon the market. The manufacturer invariably gets out a catalogue and advertises that catalogue. Those interested in that line of manufacturers should make certain of one of those catalogues.

Take as an example a stove founder. Each year the founder issues a catalogue and advertises it in his trade newspaper. It is to the retail stove dealer's advantage to secure this catalogue, and see if there is anything new, the improvements in which he thinks might interest his customers. Not only should he secure this one, but should get all others he hears of. He can then make comparisons and choose the stoves that he thinks would best suit the tastes of the class of people he has as customers.

A retailer cannot hope to see all the goods of the firms he buys from in their advertisements in the trade papers.

A catalogue should, therefore, never be despised. It will probably contain something that is new to the reader, the knowledge of which will probably come in useful at some future time.

### AGREEMENT EXPIRES.

Five years ago the big manufacturers of agricultural implements, it is alleged, entered into an agreement to cease exhibiting at the Industrial Exhibition. This agreement expires this year, and what will be the ultimate policy of those who signed this agreement is a matter over which those who are interested in the trade and in the Fair are doing some speculating. The chances are that the agreement will not be renewed, and that the implement people will exhibit at Toronto next year.



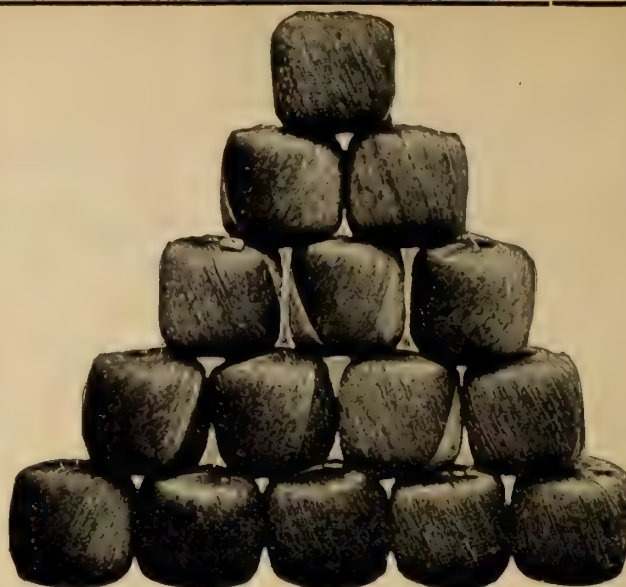
# WHO CAN SELL STOCK FOOD?

It is a matter settled that the hardware dealer, better than any other class of merchants, can sell Stock Food to the best advantage. This being so, it becomes a question as to what Stock Food to handle. There is one such Food which stands out beyond all others—

## INTERNATIONAL STOCK FOOD

—the best, the best advertised, the most readily sold of any Stock Food in the world—therefore, the most profitable. We have stacks of letters on file to prove every word of this. Hardware men find our International Stock Food agency a money-maker from the beginning. What about you? Are you selling Stock Food? Write us about it. We will startle you with our plans of co-operation.

**INTERNATIONAL STOCK FOOD CO.**  
TORONTO, CANADA



**Royal Manila is the Best**

MADE IN CANADA.

Highest Quality. : Lowest Price.

WRITE, WIRE OR PHONE.

**CANADIAN CORDAGE & MFG. CO.,**

PETERBOROUGH, ONT.

Limited

# MACHINE TOOLS

## MACHINE SHOP SUPPLIES OF ALL KINDS.

**Chucks,  
Drills, Taps,  
MILLING Reamers,  
MACHINE CUTTERS.**



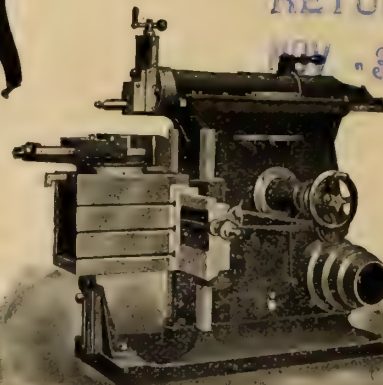
American Engine Lathes with exchanges of thread and 41 changes of feed obtainable without removing a single gear.

CANADIAN AGENTS FOR

**American Tool Works Co.**  
**Niles-Bement-Pond,**  
**J. J. McCabe (Double Spindle Lathes)**  
**R. K. LeBlond Co.**

SEND FOR PAMPHLETS,

**Lathe Dogs,  
Tool Holders,  
Power Hack Saws,  
Etc., Etc., Etc.**



American Tool Works 16-in. Shaper, with extension base.

**THE FAIRBANKS COMPANY**

MONTREAL.

TORONTO.

WINNIPEG.

VANCOUVER.



# MACHINERY

## MACHINERY MARKETS.

### Quebec.

Office of HARDWARE AND METAL,  
232 McGill Street,  
Montreal, Sept. 8, 1904.

**A**CTIVITY marks the tone of the machinery market this week to a greater extent than for some time past. The Fall season, which is usually considered in machinery circles to be one of the most active of the year, has opened up well. The trade generally is satisfied with the condition of affairs that now rules, and are sanguine of increased business in the near future.

Within the past week a good many machinery orders have been placed. Wood-working machinery is in more than ordinary demand. Machine tools of all kinds are being set up and a few boiler and engine installations are reported. On the whole business is in a very satisfactory state.

### Ontario.

Office of HARDWARE AND METAL,  
10 Front Street E.  
Toronto, Sept. 9, 1904.

**T**HE past week has been a very busy one on the machinery market.

This is, of course, due to the exhibition. This brings many customers to the city, and they, while here, have closed not a few orders. There have been numerous inquiries for all lines of machinery.

### Machinery and Electrical Notes.

**F**IRE in the compounding department of the works of the Canadian General Electric, at Peterboro, did damage to the extent of \$25,000 recently.

A new station is to be erected in Davidson, on the Prince Albert branch of the C. P. R.

The Huntsville Foundry Co.'s plant in Huntsville, Ont., will commence operations in the near future. Saw mill machinery will be built.

The Levy, Watson & McLean Machinery Co., Toronto, on account of having such a number of orders on hand for immediate delivery, were unable to make an exhibit at the National Exposition, Toronto.

J. de Cleny, mechanical engineer of Montreal, is at present busily engaged in installing several complete gas engine

plants. These include a 70 h. p. plant for lighting the Village of Ste Therese, for which saw dust will be used entirely for fuel; an 18 h. p. plant for Sir Geo. Drummond, for power and light for his house and farm at Beaconsfield, and a 32 h. p. plant for the Claevious Co.'s flour mills, Bagot County. In the latter peat is to be used for fuel.

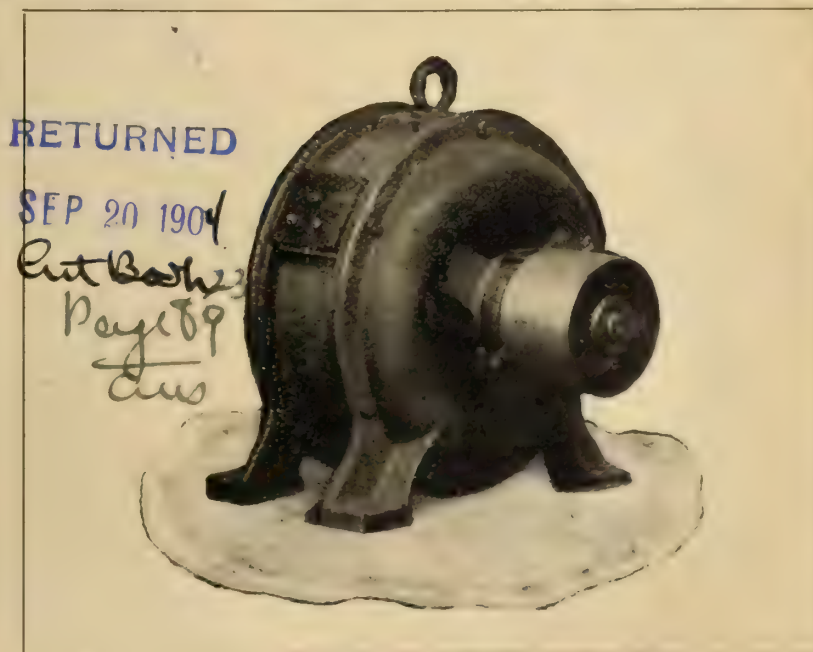
### Alternating Current Apparatus.

**A**LTERNATING current machinery is little understood by those who do not come in actual contact with its operation, so that the following technical notes on standard alternating current machinery may be of some service to the readers of this depart-

ments. These include a 70 h. p. plant for lighting the Village of Ste Therese, for which saw dust will be used entirely for fuel; an 18 h. p. plant for Sir Geo. Drummond, for power and light for his house and farm at Beaconsfield, and a 32 h. p. plant for the Claevious Co.'s flour mills, Bagot County. In the latter peat is to be used for fuel.

The output of the generators depends wholly upon the nature of their load; for a given type, the output in apparent kilowatts is constant, while the output in true kilowatts is equal to this, multiplied by the power-factor of the load. This latter may be taken as having the following average values, corresponding to different service requirements:

| Nature of Load.                                                                | Probable Power-Factor |
|--------------------------------------------------------------------------------|-----------------------|
| Incandescent lighting.....                                                     | 95 per cent.          |
| Mixed lighting.....                                                            | 85 "                  |
| Synchronous machinery.....                                                     | 95 "                  |
| Well loaded large induction motors....                                         | 90 "                  |
| Average loaded induction motors....                                            | 60 "                  |
| Average loaded induction motors and equal amount of incandescent lighting..... | 70 "                  |



ment. In designing the machinery described special stress is laid upon gaining a high efficiency and maintaining it between wide limits of load.

### POLYPHASE GENERATORS.

The machine illustrated is of the revolving field type—a type which modern practice has conclusively proved to be superior to all others, from the points of view of reliability and safety of working and pressure regulations, especially on inductive loads. It has solid field poles, or laminated shoes and armature windings in open or half open

The above figures do not include the effect of the transmission lines, which may modify them if the length is great.

The outputs of the standard types of generator are the same for two phase as for the three phase machines; the corresponding single phase generation must be rated at outputs about 15 per cent. lower, if the same guarantees are to be fulfilled with regard to efficiency, heating and pressure drop. For the standard types listed, the full load efficiency guarantees will be found in the respective tables, while the heating and



pressure regulation guarantees are as follows:

(a) Heating.—For types above say 1,500 lbs. the temperature rise of any part after six hours continuous running at full non-inductive load will not exceed 70 degrees Fahr.; for types below this, the temperature rise will be 80 degrees Fahr.

(b) Pressure Drop.—At constant speed and excitation, the fall of pressure per phase from no load to full load will not exceed 6 per cent. when the load is non-inductive, and 16 per cent. when the power factor of the load is 85 per cent.

Exciters may be either separately, rope, or direct driven, but the latter method, when practicable (generator outside engine) is usually cheapest and most convenient. Standard exciters have temperature rises (under above conditions) of 70 degrees Fahr. for the windings and 80 degrees Fahr. for the commutators. These machines are multipolar with slotted drum armatures, carbon brushes and shunt wound magnets; they operate perfectly sparklessly at all loads with a fixed position of the brushes.

The pressure regulation of all generators is performed by field regulation only; the field current is varied in accordance with the requirements of the load by means of the regulators in the field circuit of the generator and the shunt winding of the exciter.

#### INDUCTION MOTORS.

For both polyphase and single phase motors, the standard construction for the larger types includes a wound rotor with slip rings. The smaller motors either have permanently short circuited rotors, or else can be built with wound rotors, as indicated in the tables. For mining and other special work, the larger motors can be specially built with permanently short circuited rotors, and starting transformers, the latter being in oil. Motors of a given output provided with permanently short circuited rotors, are in general somewhat cheaper than those having wound rotors; the price of (rotor starting resistances and (stator) starting transformers is generally about the same.

Whenever possible, it is better practice to employ motors with wound rotors and starting resistances, as otherwise (if the motors are large) the quality of the lighting done directly from the power mains must of necessity suffer. Compared with the cheaper type, the use of the rotor starting resistance possesses the enormous advantages of affording large starting torques with small starting currents at a high power factor. In general two and three phase motors having wound rotors and starting resistances will start (at normal stator pressure) with full load torque, with a current consumption just

exceeding the full load current, and having a power factor (at a lower power factor however) to run them up to full speed without load—that is, on a loose pulley or equivalent device.

Where the guaranteed efficiency and power factor figures of machines are given, with the aid of these and the rating the full load current is obtained thus:

Horse-power  $\times$  746

Current per line wire .....  
 Terminal pressure  $n \times \cos A \times k$ .  
 Where  $n$ , the percentage efficiency divided by 100.  
 Where  $\cos A$ , the percentage power factor divided by 100.  
 Where  $k$ , 1.73 for three phase motors, 2 for two phase motors, and 1 for single phase motors.

The size of the stator wiring, capa-

motors, it is 25 per cent. before falling out of step. Constant terminal (stator) pressure is hereby assumed.

Slip.—The full load slip of all standard induction motors is 5 to 2 per cent. according to size. The full load speeds are given in the tables, and the no-load speeds can be easily obtained from them (should this ever be necessary) with the help of the value for the slip, remembering that the speed is synchronous no-load.

Munderloh & Co., Montreal, who have kindly supplied the above information will be pleased to answer inquiries from anyone interested in installing high-class, up-to-date electrical machinery.

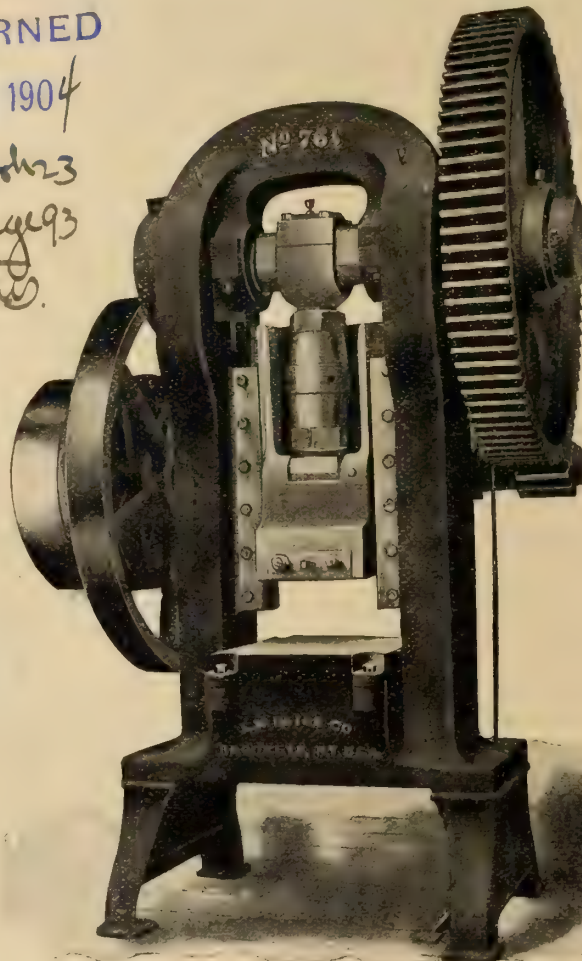
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ad.



Bliss Straight-Sided Power Press.

city of switches, fuses, etc., is based upon the value of stator current so found.

Heating.—The temperature rise of all standard induction motors, after running continuously for four hours at full speed, is 70 to 80 degrees Fahr. according to size, measured on the windings.

#### OVERLOAD CAPACITY.

For polyphase motors this is 100 per cent. before falling out of step, and 50 per cent. for one hour; for single phase

#### Power Presses.

IN few of the industrial arts has there been such progress in recent years as in that of working sheet metals into commercial articles. Some years ago the operations of cutting-off, blank cutting and forming were exceedingly simple, but the requirements of sheet metal workers have had the effect of focusing many minds on the developing of the original and primitive methods used in such work to the special



needs of various lines of manufacture. A very large number of articles are now made of sheet metal which but a few years ago were produced, or would have been produced, by casting, forging, or in the lathe, milling machine, drill-press, or at the bench. The demand for cheaper goods, and the great desirability of uniformity of product and interchangeability of parts, have had much to do with the development of these methods. Forming and stamping operations especially have become in many classes of work very complex, and the art of drawing sheet metals has come to a high state of perfection and usefulness. Automatic machines and auxiliary devices for feeding sheets and strips of metal and for other purposes having in view rapidity and economy of production have been invented and brought into service.

In regard to designation, presses may be properly divided by two methods: First, as to the work which they have been designed to perform, as punching, stamping, drawing, blanking, embossing, trimming, bending and forging presses; riveting, wiring, broaching, forming, second, as to their construction, as single action, double action, triple action, double crank, cam, knuckle joint, toggle, drop presses, etc. This latter method may be subdivided with regard to the frame, whether straight sided or overhanging, upright or inclinable, and whether made of one casting or built up in sections. Users generally designate presses by the first method while the builders employ the second.

The "Bliss" straight sided power press illustrated is a press specially designed for trimming drop forgings, either hot or cold, but is equally well suited for punching, piercing, shaping or stamping heavy blanks in the manufacture of electrical instruments, sewing machines, typewriters, cash registers, cutlery, hinges, skates, and many bicycle parts, such as sprockets, hubs, flanges, and all styles of sheet metal connections. The slides are made of unusual width and length and are supported in the gibs nearly their entire length when the die is doing its work, thus insuring better work and increased life of the tools. The right and left-hand screw connection is made very heavy. The crank shafts are forged steel and of very large diameters, the frames and other parts of press being correspondingly heavy. The "Bliss" standard automatic pin clutch is regularly used on these presses unless otherwise ordered. This press is manufactured by The E. W. Bliss Company, New York.

## CONDENSED MACHINERY ADVERTISEMENTS.

### YEARLY CONTRACT RATES.

|                                  |          |
|----------------------------------|----------|
| 100 words each insertion, 1 year | \$200.00 |
| " " " " 6 months                 | 175.00   |
| " " " " 3 months                 | 150.00   |
| 50 " " " " 1 year                | 125.00   |
| " " " " 6 months                 | 100.00   |
| 25 " " " " 1 year                | 75.00    |

### MACHINERY WANTED.

Notices under this heading inserted free for subscribers to **HARDWARE AND METAL**.

**C**IRCULAR shears and double seaming machine, in good order. Moore Bros., Bradford, Ont. (29)

**S**CALES—Heavy, double iron column dormant scales; double beam, for grain warehouse. Box 36, Hensall, Ont.

### SITUATIONS VACANT.

**M**ACHINIST WANTED—Who understands sewing machines. Apply Rhys D. Fairbairn, Limited, 8-10 Wellington east, Toronto.

**M**ACHINIST WANTED—A good machinist for general repair work, steady job. W. G. Paton, Wingham, Ont.

### SITUATIONS WANTED.

**B**Y mechanical draughtsman (mechanical engineering student) position for the winter in draughting office or some engineering works. Apply to Joseph Presner, 282 Selkirk avenue, Winnipeg.

### MACHINERY FOR SALE.

Rates for first insertion 2c a word, and for subsequent insertions 1c a word.

**F**OR heavy, machine dressed, smooth running iron or steel gearing, write the Wm. Kennedy & Sons Limited, Owen Sound.

**A**LTERNATING motors and electrical machinery, all sizes, for power and light. Jones Moore Electric Co., Limited, Toronto.

**B**OILERS—New steel boilers, 72 x 14, 66 x 14, 60 x 12; also 50 h.p. high pressure locomotive boiler for saw mill purposes. The Robt. Bell E. & T. Co., Limited, Seaforth, Ont.

**C**ANADA STEAM PUMP CO., Richmond st. east, Toronto; standard sizes in stock; write for prices.

**D**YNAMOS, MOTORS—Manufactured by McLaughlin-Joy Electric Co., Limited, 201 Queen east, Toronto.

**E**NGINES—Gas, gasoline, stationary and marine. E. Housey, manufacturer, 815 Queen west, Toronto.

**E**STIMATES given on forced and induced draft fans for steam plants. Sheldon & Sheldon, Galt.

**F**OR steel castings of reliable quality and true to pattern write The Wm. Kennedy & Sons, Limited, Owen Sound.

**G**AS and gasoline engines—stationary, marine, automobile, also launches, silver medal, highest award Dominion Exhibition, Toronto, write for catalogue. The Gasoline Engine Company of Toronto Junction, Limited.

**M**ACHINE tools for prompt delivery—planers, shapers, lathes, drills, bolt cutters, milling machines, punches and shears; also full line of machinists' supplies; good second-hand machinery taken in exchange, show room open 7 a.m. to 11 p.m. H. W. Petrie, Toronto.

**G**AS AND GASOLINE ENGINES—Fairbanks, 1 to 100 h.p., stationary, portable and marine; fully guaranteed, reliable and economical. Write for catalogue and prices. The Fairbanks Company, Toronto.

**M**ACHINE TOOLS for prompt delivery—Planers, shapers, lathes, drills, bolt cutters, milling machines, punches and shears; also, full line of machinists' supplies. Good second-hand machinery taken in exchange. Show room open 7 a.m. to 11 p.m. H. W. Petrie, Toronto.

**O**NE second-hand gap lathe; swings 40 in. and 26 in.; 12-ft. 6 in. bed. Address Box 748, Montreal.

**O**NE second hand shafting lathe, 26 in. swing, 20-ft. bed. Address Box 748, Montreal.

**P**UMPS—Standard duplex pumps in stock. The Smart-Turner Machine Co., Limited, Hamilton.

**T**HE STUART MACHINERY CO., LTD. 764-766 Main street, Winnipeg, sole agents in the West for MacGregor Gourelay swood working and iron working machinery, than which there is none better. Also for Beardmore's leather belting, Dodge wood pulleys and self-oiling hangers, Soule steam feeds for sawmills, E. Leonard & Son's engines and boilers, Stratford flour mill machinery etc. etc., etc.

### BUSINESS CHANCES.

**A** FIRST-CLASS Sawmill for sale cheap; in good condition; in good locality. Apply to Mrs. N. Fulton, Box 59, Fingal, Ont.

**C**IDER MACHINERY—Hydraulic press; revolving table; pumps; jelly machinery; 20-in. vertical and 48-in. Burr chopping stones; all complete. Box 36, Hensall, Ont.

**F**ACTORY ROOM TO RENT—Town of Dundas; cheap to right people; electric power; steam heat. Apply or write, J. A. Kammerer, 80 King street east, Toronto.

**IF you want to Buy Machinery of any kind** We will assist you in every way.

**IF you want to Sell Machinery of any kind** We will assist you in every way.

Write for full particulars to:

**Information Bureau**

**Hardware and Metal and Canadian Machinist**

MONTREAL TORONTO WINNIPEG



**Multiple Spindle Drill Press.**

THIS tool was designed to meet the long recognized need of an automatic multiple drilling machine that would accomplish several results. It should drill two or more holes in close proximity to each other. It should drill a large number of holes from 50 to 150 if desired, and varying in size from No. 60, wire gauge to one inch in diameter, in any position desired, and run each drill at its own proper cutting

tured by the National Automatic Tool Company of Dayton, Ohio.

The machine illustrated, is built with a revolving hexagon turret head and a feed table on platen which is automatically indexed from left to right. Each face of the turret is provided with a set of drill plates which are bolted to the turret and may be removed at will. In these plates are mounted the drill spindles which can be quickly arranged as to position to correspond with the holes

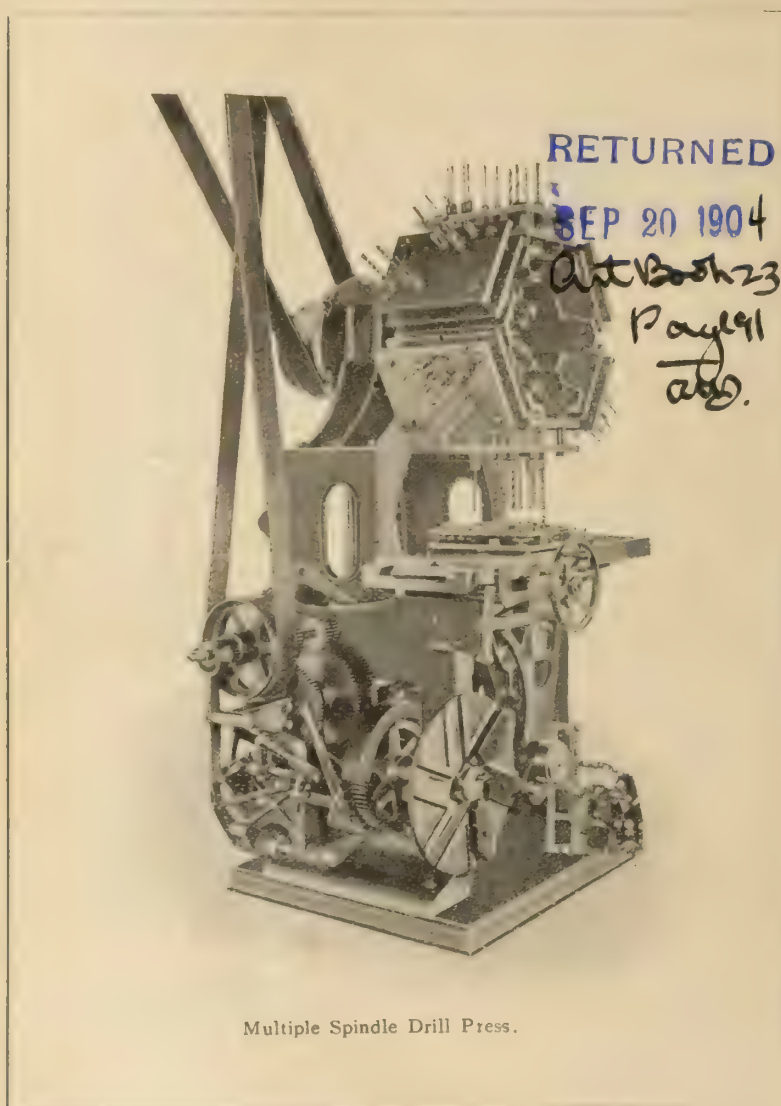
end of which extends through the back of the turret. As the turret is indexed and each set of plates come into a vertical position the end of this fork passes under a dog on the frame of the machine causing the clutches to close and the drills to revolve.

By this means only the drills in actual use revolve. The drill spindles are all hardened and ground and run in bronze bushings. They are also provided with ball bearing upper thrusts, which greatly reduces the friction. The turret is automatically indexed by means of a large lever at the rear of the machine. This lever is actuated by a large cam wheel near the base of the machine. This cam wheel serves three purposes: first, it withdraws the shot-bolt from the turret index plate; second it actuates the index lever thereby indexing the turret; third, after the turret is indexed and the shot-bolt back in its notch, it securely locks the shot-bolt in each indexed position, making the turret absolutely rigid. The throw of the index lever is adjustable by means of a cap and screw situated on the outer end of the lever. Any wear in the shot-bolt may be taken up by means of a right and left hand screw in the centre of the shot-bolt.

The feed table or platen, covers a space of 14 inches by 36 inches. It is automatically elevated to meet the drills, and runs in long vertical ways to insure accuracy. Where horizontal drilling is desired and horizontal spindles are attached to the platen, and are elevated and lowered with it. The power for the horizontal drills is supplied by chains and sprockets from the main driving pulley on the back of the turret. These drills operate simultaneously with, but are entirely independent of the drills in the turret, and are also arranged with clutches which throw them out of operation when not drilling.

There are three changes of speed for elevating the platen. This is shown by the three large spur gears on the left of the machine. The first or fast speed, is for indexing and bringing the work up to the drills. The second or intermediate speed, is for drilling in cast iron and the third or slow speed is for drilling in steel. These changes in speed are instantaneously and automatically made by the machine when in motion. It is accomplished by means of a double-ended clutch and fork lever and by a time wheel and rocker arm shown in rear view of the machine.

The drill jigs are securely doweled to

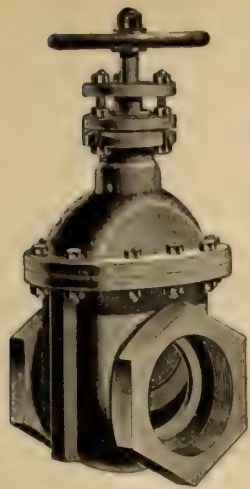


Multiple Spindle Drill Press.

speed and maximum feed. It was desired further to provide a machine for the market that would be a universal tool, viz., one that could be changed readily from one job to another. This is accomplished by detachable heads or adjustable spindles. The machine was also to be not only for vertical drilling but one that could be built if desired, to drill from all horizontal directions. This has been accomplished in the Multiple Spindle Drill Press manufac-

to be drilled. Every spindle is provided with a chuck and a spring collet of our own manufacture. On the upper end of each spindle is a spur gear of such size to give the proper number of revolutions to the drill. These gears are driven by a main driving gear in the centre of the plate. The shaft of this driving gear extends into the turret and is driven by the turret bevel gears. On each of these shafts are a set of clutches operated by a clutch fork one





## BUY KERR VALVES.

They give  
satisfaction  
every time.  
Catalogue  
on application.

The Kerr Engine Co.  
LIMITED  
Walkerville, Ont.

## SPECIFY



## INJECTORS

PENBERTHY INJECTOR CO.,  
LIMITED.

BRASS MFRS. Windsor, Ont.

### "MAPLE LEAF"

Stitched Cotton Duck Belting



MADE IN CANADA

MADE IN CANADA

"Maple Leaf" is made of the best cotton duck, woven to our special formula.

"Maple Leaf" is the truest running belt on the market.

"Maple Leaf" is superior to either Rubber or Leather, and in many places will do work that no other make of belt will.

"Maple Leaf" is suitable for all kinds of factories, mills, etc., for power and carrying.

Main Drive Belts a specialty.

Ask for "Maple Leaf" and take no other.

Beware of Imitations

MANUFACTURED ONLY BY THE

DOMINION BELTING COMPANY

HAMILTON, ONTARIO. Limited

Use our "MAPLE LEAF" Belt Dressing.



Uncle Sam would not allow his Battleships to be babbitted with an inferior babbitt metal. New Battleship "Nebraska" is lined with

## SYRACUSE BABBITT

Always specify best; it is cheapest in the long run

Syracuse Smelting Works,

Montreal,  
New York,  
Seattle.

ASK YOUR DEALER FOR IT.

## H. & R. SINGLE GUN AUTOMATIC AND NON-EJECTING

12, 16 and 20 Gauge.  
Steel and Twist Barrels  
Superior in Design, Workmanship  
and Finish, and the most popular  
Gun on the Market.

Simplest  
"Take Down"  
Gun Made



HARRINGTON & RICHARDSON ARMS CO.  
Also makers of H. & R. Revolvers.  
Catalog on request. Worcester, Mass., U.S.A.

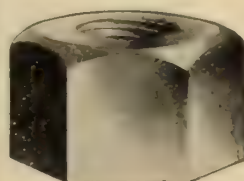
# BABBIT

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NO. 1  
STAR  
SPECIAL  
HERCULES  
METALLIC  
IMPERIAL

THE  
QUALITY & PRICE TO SUIT  
ALL GRADES OF WORK.

CANADA METAL CO.

WILLIAM ST., TORONTO. TELEPHONE MAIN 1729.



## REMEMBER

We are the only Canadian manufacturers of

## COLD PRESSED NUTS

Finished, Semi-Finished, Case Hardened,  
Plated, Polished, etc.

SPECIAL DISCOUNTS TO THE TRADE

CANADA FOUNDRY COMPANY

LIMITED

Head Office and Works, TORONTO, ONT.

District Offices — Montreal, Halifax, Ottawa, Winnipeg, Vancouver, Rossland, Calgary.



the platen and the operator standing in front of the machine has simply to return the platen to the starting position, take the completed work out of the jig insert a new piece and pull the starting lever. The machine continues running then until the piece is entirely completed when it automatically stops and is ready for reloading. When more than one jig is used the operator loads and unloads one while the other is being worked on, thus losing no time.

The machine may also be instantaneously stopped in any position, at the will of the operator by simply pulling up the stop lever at the extreme left. A hand crank is provided for lowering the platen in case of a broken drill or other accident. The machine is built strong and unusual care has been taken to make each part adjustable. It weighs 3,600 pounds without boxing. It will stand any strain that may be put on it from any work within its scope.

#### "Imperial" Drills.

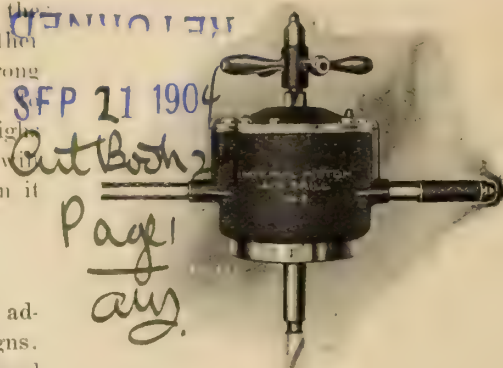
"IMPERIAL" drills exhibit an advance over conventional designs.

The cylinders revolve on a fixed crank pin in which there are two ports, one for admission and one for exhaust. Thus, the crank itself, which is a steel forging case-hardened and ground, serves as a valve and there are no eccentrics. The motor consists of three cylinders which are cast of steel in a single piece. The cylinders are 120 degrees apart and radiate from a central hub. The cylinders, however, are not truly radial, but are set off 1-4 in. to 1-2 in. according to the size of the drill. As a result of this set off the connecting rods are practically perpendicular to the piston head throughout the outward or working stroke, thus minimizing the wear of the cylinders and pistons.

The cylinders are hung between triangular-shaped frames which revolve with them, the connecting rods of the pistons working on the pins which rigidly connect the upper and lower frames. These frames are mounted on stationary discs upon which they revolve on ball bearings. The stationary crank pin, referred to above, is forged in a single piece with the upper disc, the centre of the crank pin being set off from the centre of the disc by a distance equal to one-half of the piston stroke. The cylinder hub through which the crank pin passes is bored with a taper hole and has a bronze bushing with corresponding taper, thus permitting of adjustment to take up wear. This taper-

ed bushing has three parts, registering with ports at the end of each cylinder, and air is admitted to and exhausted from the cylinders successively through the parts in the crank pin as the cylinders revolve, the crank pin thus forming a Corliss valve.

All parts are perfectly balanced and all rotation takes place about fixed centres, resulting in absolute freedom from vibration and consequent long life for the tool. It will therefore be seen that, as admission and exhaust takes place only at this central crank pin there is



no necessity for having the casing air tight. This point is evidenced by Fig. 1, which shows the "Imperial" motor without casing working at 3,000 revolutions per minute. This is an advantage over designs where the casing must be kept air tight by packing.

The power from the motor is transferred to the spindle by a pinion on the lower triangular frame, gearing into a pair of traveling gears which are attached to the head carrying the drill spindle. An internal rack gear is cut in the case into which the traveling gears mesh, forming the combination

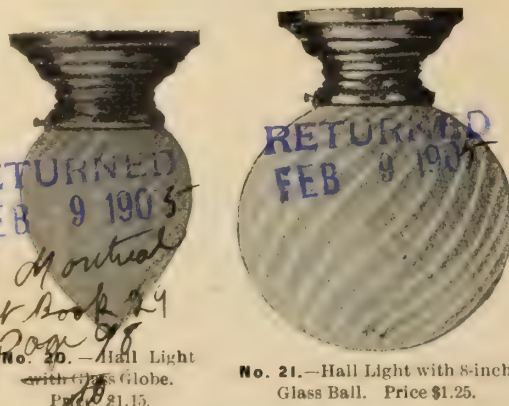
known as "planet" gearing. The thrust of the drill spindle is taken up by ball bearings of large diameter. The case, in which the motor and gears are contained, is made oil tight. If desired the motor can be run in a bath of oil. All pins and bolts subjected to wear and ball races are of steel, case-hardened and ground, and all working parts are of phosphor bronze. The Imperial drills are manufactured by the Canadian Rand Drill Co., of Sherbrooke, Que.

#### CONDITION OF TRADE.

The following is the way a local firm of Davenport, U.S.A., characterizes the features that tend to do away with the comfort and prosperity of the local trade:

Too much politics, too much fair;  
Too much water with too much air;  
Too much stock and too little used;  
Too much credit, too much abused;  
Too little money, too slow pay,  
Too many men getting too gay;  
Too much combine, too much trust,  
Too much getting-rich-quick or bust;  
Too much fish and too little beef,  
Too much waiting for strife-relief;  
Too much fighting at great expense,  
Too much war without much sense;  
Too much worry, day by day,  
Too much work for too little pay.  
Too much worry, day by day,

The Sayer Electric Co., of Montreal, have been appointed agents in Canada for S. H. Couch Co., of Boston, telephone manufacturers. Already several large orders have been received for these telephones, which are a popular line.



WRITE FOR QUANTITY PRICES.

**THE SAYER ELECTRIC CO'Y, 10-14 BEAVER HALL HILL MONTREAL**

## 2 Specials in Hall or Vestibule Fixtures.

These prices are to the trade only. Send for Bulletins Nos. 10 and 11 for other fittings.

EVERYTHING ELECTRICAL.



# F. W. LAMPLOUGH & Co.

## MONTREAL.

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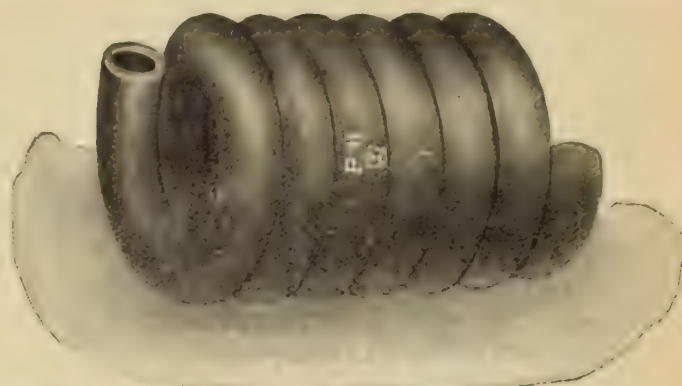


### CUTS ECONOMICALLY

P. H. Crown Pipe comes in extra long lengths, and cuts with little waste.

Give orders to your jobber, but insist upon P. H. brand.

Quality will be remembered long after price has been forgotten.



PAGE-HERSEY IRON AND TUBE CO., GUELPH, LIMITED, ONTARIO

Have you any call

FOR

BRASS  
STAMPED  
LABELS?



We make these goods in all sizes and designs to order. Let us have your enquiries for Stamped Brass Goods, such as:

Curtain Rings and Hooks,  
Mill Band Fasteners, etc.



We will be glad to quote for special lines or submit samples of regular lines.

LOOK FOR THIS TRADE MARK—



J. Nicklin & Co.,

Canadian Agent,  
F. P. ROGER, Carlaw Bldg., TORONTO

BIRMINGHAM, ENG.

### Butler's Famous Cutlery AND Electro-plate.

Sole Makers of Butler's "KEEN" Razors, the "Cavendish" Brand of Table Knives, Carvers, and Plate (Regd.).

HIGHEST AWARDS. SPECIAL MENTION.

**GEORGE BUTLER & CO.'S**  
London Showroom:  
62 HOLBORN VIADUCT, E.C.  
(Over Snow Hill Station).  
Manufactory: Trinity Works,  
SHEFFIELD, ENGLAND.

"BUTLER" was Registered as a Trade Mark A. D. 1768.

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## Machinery Hall at National Exhibition.

**T**HE Machinery Hall of the Canadian National Exhibition, Toronto, was a building visited by all classes of people. Machinery in motion is an attraction that few people are not susceptible to, and many of the visitors went merely because they liked to see the wheels go round. However, by far the greater majority went to learn, and to them the exhibits were educative as well as interesting. Exhibitors were only too pleased to explain the principles

of their machines and devices to those who showed interest in them. There is a marked improvement in the appearance of the Machinery Hall this year. This is to be noticed not only in the general arrangement, but also in the individual exhibits themselves. One noticeable feature this year is the increased number of machines in actual operation, and, of course, this feature improves an exhibit greatly.

There is a way indicative of the progress made in this branch of Canadian industries. The field for the manufacture of machinery of all kinds in Canada is rapidly broadening out, and is from all appearances being as rapidly filled up.

### Dominion Belting Co.

The exhibit of the Dominion Belting Co., Hamilton, Ont., consisted of an attractive display of their "Maple Leaf" stitched cotton belting and their "Maple Leaf" belt dressing. This belting is the production of raw material of Canadian origin, which is made up especially to the company's own formula. The claim for this belting is that it is unaffected by steam, hot air or acid fumes.

### Georgian Bay Engines.

The Georgian Bay Engineering Works, Midland, Ont., exhibited a four horse-power gasoline engine. This firm are manufacturers of marine and stationary gasoline engines, the stationary engine being specially adapted for farm use, towing machines, hoisting machines, contractors' plants, etc. The engine on exhibit was of the four-cycle type. The lubricating of all parts of the engine are well provided for. Allowance is made for the adjusting of all bearings. The water jacket of the cylinder of this engine has the great advantage of being easily cleaned. The firm manufacture engines from 2 horse-power to 15 horse-power in the two styles, stationary and marine. The company are preparing to manufacture portable engines for the Northwest.

### Jones Stokers.

The Jones Underfeed Stoker Co., whose Ontario representative is D. Watts, 20 King street west, have charge of the boiler plant at the Machinery Hall, and they are stoking the boilers with the Jones automatic underfeed stoker. A practical demonstration of the economy and handiness of mechanical stokers was given at the plant. Forced mechanical draft was used in connection.

### The Canada Metal Co.

The exhibit of the Canada Metal Co., William street, Toronto, was one which does credit to the firm. The exhibit consisted of a well arranged display of their many metal products. In connection with the exhibit the firm has a



Canadian National Exhibition—Exhibit of Dominion Belting Co.

are constantly appearing upon the market. This year there are several new exhibits in this line. There were the usual exhibits of steam pipe coverings and boiler coverings this year; and there were also the usual bearing device exhibits. There was one additional metal exhibit. Steam supply exhibits made about the same showing this year as last.

It is very gratifying to see this improvement in the Machinery Hall. It





Canadian National Exhibition—Exhibit of The Canada Metal Co.

carpeted reception room where the western representative of the firm, Mr. Matthews, who had charge of the exhibit, could ask tired exhibition visitors.

They exhibited a full line of their products, including lead pipe of all sizes; electric battery zinc, of which this firm claim to be the largest Canadian manufacturers, electric fuse wire from one ampere size upwards; babbitt metal of every description, which is a specialty of this firm; canna lead for glaziers; block tin pipe; phosphorus tin; pure tin; solder of all grades; ingot copper; stereotype and linotype metal.

In connection with stereotype and linotype metal, were exhibited the semi-circular forms as used on cylindrical printing presses. The exhibit was tastefully decorated with streamers and bunting.

#### D. K. McLaren Belting.

The exhibit of the D. K. McLaren, Montreal and Toronto, was both handsome and attractive, with its pyramids of different kinds of belting. Their genuine oak tanned leather belting was given great prominence. Their Balata and rubber belting were also in evidence, and their American duck and Baltimore belts were also exhibited. It is claimed that the genuine oak English tanned belting has more solid leather to the foot than any other belt made.

#### United Electric Co.

The exhibit of the United Electric Co., Toronto, consisted principally of dynamos, motors and a switchboard.

Running nearly all the time were two large direct current generators, one belted to an engine manufactured by the Robert Ball Engine and Thresher Co., Seaford, Ont. There were also exhibited alternating current and induction motor desk fans. The exhibit was attractively surrounded by electric lights with dimers colored bulbs.

The machines exhibited included alternating generators and motors and direct current generators and motors.

#### Toronto and Hamilton Electric Co.

Among the exhibits of electrical machinery was that of the Toronto and Hamilton Electric Co., Hamilton. The exhibit consisted of eight machines in all, of multipolar type, some protected by closed in cases and others open. One generator was running belt connected to the line of shafting running down the northern side of the hall; while another was direct connected to a vertical steam engine. The company also exhibited a switchboard and made use of it in the running of the motors.



Canadian National Exhibition—Exhibit of D. K. McLaren.



**A. R. Williams.**

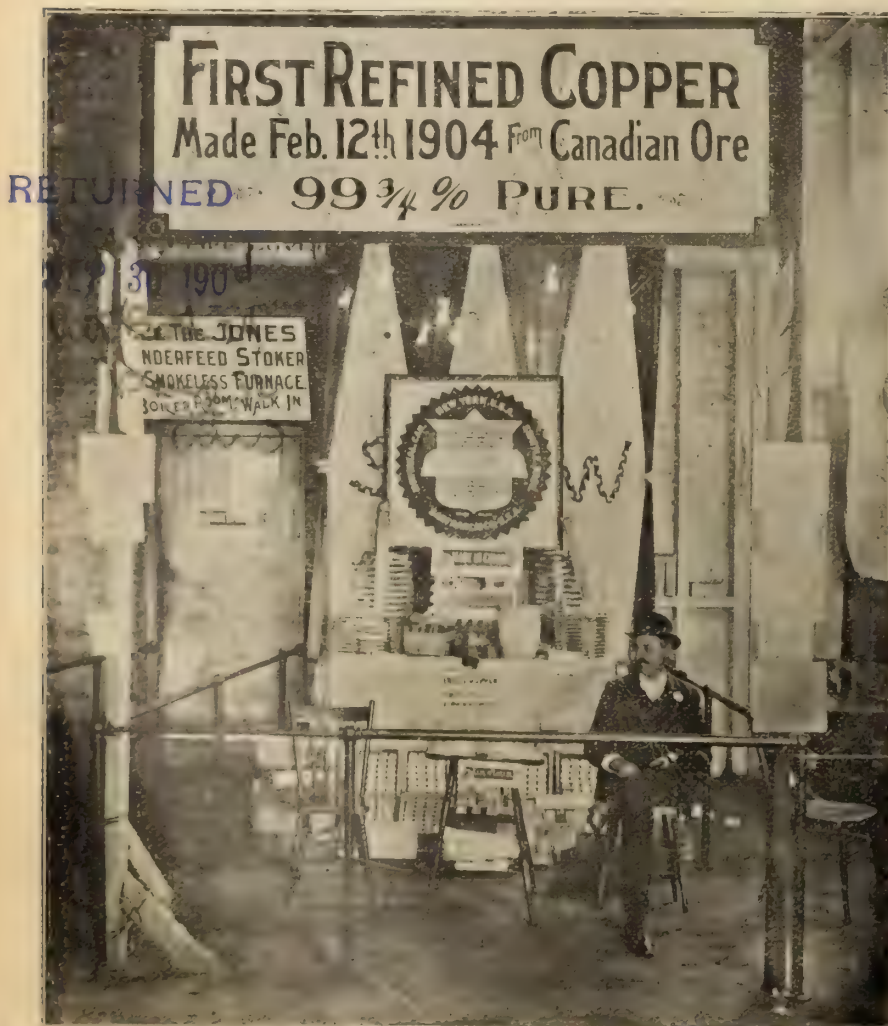
Practically the only exhibit of machine tools in the Machinery Hall was made by the A. R. Williams Machinery Co. Front street, Toronto. Besides machine tools they exhibited mining machinery and wood-working machinery. The machine tools exhibited included an engine lathe, a large radial drill, 2 small drilling machines, a milling machine and others. All these machines were run from the line of shafting running down the north side of the building. Shown in operation was a slotting machine, the base of which was left open, disclosing to view the driving mechanism. The engine lathe exhibited was provided with screw cutting devices.

Among the wood-working machinery exhibited was a surface planer, also run from the line of shafting above. Practical demonstrations of the powers of this machine were given to spectators.

The exhibit was surrounded and closed in by a line of shafting supported on ceiling hangers, which was indica-



Canadian National Exhibition—Exhibit of The A. R. Williams Machinery Co.



Canadian National Exhibition—Exhibit of Syracuse Smelting Works.

tive of the shafting and accessories carried by this firm.

**Syracuse Smelting Works.**

Next to the boiler room in the Machinery Building the compact display of the Syracuse Smelting Works, Montreal, attracted great attention from machinery users, plumbers, etc. "Syracuse" babbitt metal, already so well known to the trade, comprised the chief portion of the exhibit, shown in all sizes and to the highest quality. An interesting feature was two bars of the first ingot copper refined in Canada from Canadian ore. Pig lead, solder in all qualities, crucibles for refining, pig tin, aluminum, bismuth, spelter, antimony and other metals, were shown to excellent advantage, and the firm's representatives were kept busy giving the "glad hand" to visiting customers and explaining the merits of the line to inquirers.

**Gasoline Engine Co.**

The Gasoline Engine Co., of Toronto Junction, Limited, have an exhibit of their engines in the launch section of the Farm Implement Building. The exhibit consisted of gasoline engines of different sizes, also gasoline launches and supplies of all kinds. This company manufacture a 2-cycle marine engine from 2 to 6 horse power. They have recently made an improvement on this class of engine by the addition of a water jacket and an automatic oiling device for the connecting rod bearings.





Canadian National Exhibition—Exhibit of The Philip Carey Mfg. Co.

### The Philip Carey Mfg. Co.

The exhibit of the Philip Carey Mfg. Co., Adelaide street west, Toronto, consisted of rolls of 185 per cent. magnesia standard asbestos and woolen felt pipe coverings, and also a small house illustrating their roofing material and the manner of putting it on. This roofing material is flexible cement roofing which consists almost entirely of a heavy, flexible body of asphalt cement. The foundation consists of a heavy, strong woolen felt; next that is the layer of asphalt cement; and in the upper surface of the cement is embedded a strong burlap, which is protected from the weather by a thick coat of paint.

### Canadian General Electric.

The largest space in the Machinery Hall was occupied by the Canadian General Electric Co. and Canada Foundry Co., of Toronto, their exhibit consisting of four carloads of electrical machinery and foundry products, covering a space of 120x14 feet.

The exhibit was most admirably displayed, and gave the visitor some idea of the vast range of products made by this company.

Starting at the entrance of this building, first appeared a display of cast-iron pipe and special castings. Following this was a large space devoted to the electrical interests, and here the attention of the wireman was fixed as he looked with envious eyes on the display of electrical supplies. The ladies' attention was arrested by a display of electrical cooking

and heating apparatus. A full line of transformers was displayed, together with the core and coils used in their manufacture, demonstrating the method of insulation used in the manufacture of the well known type "H." There was also shown a complete line of direct current motors from 2 h. p. to 35 h. p., and standing nearby were two K.10 railway controllers with the cover off, disclosing the mysterious working parts. A hand

some marble switchboard formed the background.

On the wall was arranged a neat display of armature and transformer punching and armature coil insulated ready to be placed in the machines.

Next came a display of waterworks supplies, consisting of hydrants, valves and valve boxes.

The "Easy" injector and "Beaver" post hole diggers made by this company caused no little interest, and were shown and explained many times.

A large and imposing pyramid of set screws and nuts next caught the eye, of which the variety was a surprise to even those mechanics who are constantly using them.

In the office was displayed views of the different factories and descriptive matter. A very handsome mantle illustrated the use of fire dogs, fenders and smoke guards to good advantage.

Then followed a line of the well known "Northey" pumps; a "Triplex" pump 5 in. by 8 in., driven by a 10 h. p. motor, supplying 180 gallons per minute for a water race, which attracted much attention, not only from the mechanical standpoint, but, being tastefully decorated with ferns and moss, also from an artistic aspect.

The products of the Subway Works were shown by a superb teller's cage, finished in matt copper, with a counter railing of handsome design in a like finish. Samples of electro finishes were shown in endless variety. A very choice selection of wrought iron auditors, fenders



Canadian National Exhibition—Exhibit of The Canadian General Electric.



ers and fire screens attracted much attention. The whole formed a display calculated to impress one with the conviction that Canadians have in their midst a source of supply in electrical and mechanical engineering lines equal to anything on the American Continent.

On the law was displayed an assortment of fountains, both ornamental and drinking, together with some handsome cast iron flower vases and lawn rollers, the whole enclosed by a neat wrought iron fence. Close by was erected one of the wrought iron towers used by the Toronto & Niagara Power Co. in their electrical transmission line from Niagara to Toronto.

#### Babcock & Wilcox, Limited.

Babcock & Wilcox, Limited, Montreal, had their usual space in the machinery hall, and exhibited one of their standard types of water tube boilers, fitted with a superheater. The works of this firm are at Renfrew, Scotland, and their head offices in London, Eng. Their Canadian offices are in Montreal and Toronto.

These boilers are known the world over. The boiler is composed of a number of sections, each consisting of several tubes, expanded at each end into staggered headers. The headers are provided with hand holes placed opposite each tube to permit of cleaner, or in case of necessity, the removal of the tube. The entire boiler is suspended by wrought-iron slings from iron girders resting on wrought-iron columns, so that the weight of the boiler does

not rest on the brickwork, and the boiler can expand or contract without any strain being thrown on the brick-

work. The boiler and furnace are enclosed in masonry lined with firebrick where necessary, the furnace being arranged below the tubes, and firebrick baffles compel the hot gases to pass upwards, then downwards, then upwards again, before escaping to the chimney, the flow of the gases being practically at right angles to the heating surface. The damper for regulating the draught and flow of the gases is placed in the rear wall, whilst doors for cleaning the tubes and removing soot are placed on one side of the brickwork setting of each boiler.

The superheater employed in this form of boiler consists of a number of solid drawn steel tubes, bent into U form, and expanded at each end into wrought-steel manifolds.

#### Electric Machinery Exhibit.

Among the exhibits of electrical machinery that of the Consolidated Electric Co., Yonge street, Toronto, was to the front. They exhibited motors and dynamos from 1-8 horse-power up to 40 horse-power. A 40 horse-power dynamo was running, being belted to the line of shafting extending down the Machinery Hall. The smooth and noiseless running of this machine was very noticeable, and no vibration could be felt



Canadian National Exhibition—Exhibit of Babcock & Wilcox.



Canadian National Exhibition—Exhibit of Consolidated Electric Co.



with the hand placed on the frame of the machine.

These machines, the "King Edward" by name, have a slide base, self-oiling and self-aligning bearings. The field poles are built up of thin sheets of steel welded into the frame, which construction is claimed to be superior to the bolting of the pole pieces to the frame. The frame is heavy and substantial. The machines are well ventilated, openings in the armature allowing free passage of air through the core. Ventilation is helped by ducts perpendicular to the axes of the core, through which, when the machine is running air is drawn down into the armature against the field coils.

#### J. C. McLaren Belting.

This firm had their usual handsome exhibit of belting and belting supplies. The belts manufactured by this firm are all made from genuine English oak-tanned stock, a tannage which has properties especially adapted for the exacting work peculiar to electric plants. This firm recently closed what is claimed to be the largest individual order for belting an electric plant that has been placed in Canada. The order was from the Montreal Street Railway for their generating plant. There were also exhibited "Thistle" rubber belting, "American" cotton and "Gandy" belting. The plant of this firm is at 50 Colborne street, Toronto.

#### The "Reeves" Pulley.

The Reeves Pulley Co. Columbus Ohio, had their exhibit of iron centre wood-rim pulleys in the Annex Building. The method of fastening of the iron arm to the wood rim of this pulley is very simple, embodying the principle used in the wood split pulley which is the building the arm up with the rim.

#### Henderson Roller Bearing.

The feature of the exhibit of the Henderson Roller Bearing Mfg. Co., Limited, Toronto, was the electric car truck equipped with the roller bearings. This truck weighs three tons, and by means of a weight of four lbs. 14 ozs. attached to the end of a string over a pulley it could be moved back and forward. This truck is of the class used by the Grand Valley Railway Co., Brantford. The company also exhibited a line of shafting equipped with the Henderson roller bearings, run by a small electric motor.

This bearing consists of bearing rings

and rollers, journalled in the rings. The weight rests on the body of the roller, the pintles of which carry round the cage. The bearing is provided with spanning rollers which contact the face of the bearing rollers, and form a rolling contact with them. Thus the pintles are relieved of part of the strain of keeping the rollers in line. The end thrust is provided for by loosely abutting end thrust means, which contact the rollers.

#### Eureka Mineral Wool and Asbestos.

The Eureka Mineral Wool and Asbestos Co., Toronto, made an attractive exhibit of their coverings for boilers and steam pipes. There was also an

hibited in the Machinery Hall the brick machine invented by E. Von der Osten. The brick turned out by this machine are of the cement and sand variety. These bricks are equal in appearance to pressed brick.

#### Goldie & McCulloch.

Goldie & McCulloch, Galt, Ont., exhibited engines, wood working machinery and flour mill machinery. The line of shafting on the north side of the Machinery Hall is run by a Wheelock engine supplied by this firm, while the south side shafting is operated by an "Ideal," also manufactured by this firm. Wood working machinery was represented by a 30 inch double surface planer and a 12 inch four-sided moulder.



Canadian National Exhibition—Exhibit of J. C. McLaren Belting Co.

exhibit of asbestos paper, millboard, cement with rope and cloth. Mineral wool partakes of the nature of glass fibres, without their brittleness. The fibres are soft, pliable and interlace one another and thus form innumerable and minute air cells. It has proved its worth as an insulator of heat, as a protection against frost, as a sound deadner and also as a protection against rats, mice and insects.

#### Brick Pressing Machine.

The Sheetz & Lynde, Jordan street, Toronto, sales agents for E. Von der Osten, consulting engineer, Toronto, ex-

hibited in the Machinery Hall the brick machine invented by E. Von der Osten. The brick turned out by this machine are of the cement and sand variety. These bricks are equal in appearance to pressed brick.

#### "Ideal" Gas Engines.

The Goulds, Shapely & Muir Co., Limited, Brantford, Ont., occupied their usual space, in which they exhibited the Ideal gas and gasoline engines in the portable and stationary styles. These engines are manufactured in sizes from 2 to 25 horse power. This firm are manufacturers of wind mills, and it is of recent years that gas and gasoline engines occupied their attention. The line of engines in operation attracted no little attention.



**Marine Engine Exhibit.**

The Hamilton Motor Works, Hamilton, made an exhibit of gasoline marine engines of several sizes and kinds. In the same space was an exhibit of pumps made by the Smart & Turner Machine Co., Hamilton.

**Jones & Moore Exhibit.**

The exhibit of electrical machines and goods made by the Jones & Moore Electric Co., Adelaide street, Toronto, was indeed a handsome one. The light-

trolled from the switchboard shown by the company. So well was this dynamo regulated that when a number of lights were cut out by opening one of the switches the pressure did not vary 1-4 volt.

The switchboard was in itself a feature of the exhibit, being handsomely lighted with differently colored lights. On the switchboard was shown an automatic cut out switch, besides the ordinary kinds.

There was also displayed a full line

possesses over ordinary babbitt metal. The lines of shafting down each side of the hall are equipped with these bearings. Thus far the chief application of these bearings has been on shafting, although it is claimed that they are suitable for all classes of work.

The bearing consists of a cage carrying the load-carrying balls, kept a certain distance apart by apartments in the cage. To secure positive motion of all the balls, and thus eliminate friction, small contact balls are placed in the frame, forming a rolling contact with the load-carrying balls.

**Ker & Goodwin.**

"Why buy foreign lathe chucks?" was the question distributed on thousands of cards by Ker & Goodwin, Brantford, Ont. This firm are widely recognized as machinery supply dealers, and have branched out into the manufacture of lathe chucks. The best obtainable steel is used, the most capable workmen are employed, and every attention given to the production of the best possible chuck. The firm's display was visited by many lathe users and their comments were such as to indicate that the Canadian-made lathe will find a ready sale in all parts of the country.

**Electric Co.'s Display.**

The McLachlan-Joy Electric Co., Limited, Queen street east, Toronto, made an exhibit of their machinery. The exhibit included dynamos and motors of the bi-polar and multi-polar type. There were five machines on exhibit. The sign was tastefully outlined with electric lights of different colors.

**Queen City Motor Cycle.**

In the Machinery Hall the Queen City Cycle and Motor Works, 304 Queen street west, Toronto, had an exhibit of three motor cycles, together with the necessary supplies. The cycles were of different horse-power, one being 13-4 horse-power, one 21-2 horse-power and the other 3 horse-power.

**Dodge Mfg. Co.**

The Dodge Mfg. Co. of Toronto, Limited, Toronto, occupied the same space in the Machinery Hall this year as last. Their exhibit consisted of transmitting machinery of all kinds, including the standard wood split pulley, iron pulleys, shafting and shafting couplings, clutches and iron clutch pulleys.

The Dodge wood split pulley is well known. It is made with interchangeable bushing systems. The rim of this pulley is constructed by building up a series of rings of segments being glued with insoluble glue.



Canadian National Exhibition—Exhibit of Ker & Goodwin.

ing of the exhibit added greatly to its appearance, 12 of the Adams Bagnole type of are lamps being strung around the exhibit.

The chief part of the exhibit of course consisted of 12 electric motors ranging in horse-power from 3 up to 80. There were shown multi-polar and bi-polar types, together with controlling devices for the different sizes. An 80 horse-power dynamo supplied power for the lighting of the company's own exhibit and also many others. All were con-

trolled from the switchboard shown by the company. So well was this dynamo regulated that when a number of lights were cut out by opening one of the switches the pressure did not vary 1-4 volt.

Another feature of the exhibit was the motor run suction fan for ventilating purposes.

**Chapman Double Ball Bearings.**

The Chapman Double Ball Bearings Co., of Canada, Limited, Scott street, Toronto, held their usual position in the Machinery Hall, and the representatives of the company were constantly employed demonstrating the principle of their bearings, and also the advantages it



# CANADIAN NATIONAL EXHIBITION, TORONTO

AUGUST 29 TO SEPTEMBER 10, 1904.

**F**EW of those interested in the Canadian National Exhibition dared to expect, after the exceptional success of the Dominion Exhibition last year, that such a success would be repeated this year.

It will be remembered that in the year previous to 1903 there had been considerable criticism of the management by those interested in the industrial displays, culminating in an agitation which found expression in *Hardware and Metal* and other trade papers of such strength that the directorate of the exhibition board was affected, and a decision to give more attention to the industrial exhibits reached.

While the prominence to the amusement features was in no wise diminished, the attention given to, and the facilities afforded, the industrial displays was greatly increased. The success of the last two years is proof of the wisdom of this move, and striking testimony to the administrative wisdom of W. K. McNaught and Dr. J. O. Orr, manager and secretary of the association.

His Honor the Lieutenant Governor struck the right note in his address at the official opening of the Canadian National Exhibition on Monday, August 29, when he remarked "This Exhibition is the greatest Exhibition of the kind which has ever been held in Canada." It is a subject of general remark that the Exhibition of Toronto is the best thing of the kind on the North American continent.

This year's Exhibition is no exception to the rule and reflects the greatest possible credit upon the directors and all who have taken an active part in its management. What strikes one most is the enormous strides the Exhibition has made during the past year. New buildings have been added, and the grounds improved generally until the prospect resembles a miniature city of palace structures.

## Improvements.

The most important addition is the new Administration Building, a fine buff brick structure two stories high, built in colonial style. The directors and business managers occupy handsomely appointed quarters here and make the

Administration Building their centre of official operations. It is to be hoped this is only another addition to the already large number of handsome substantial structures which now adorn Exhibition Park. The Toronto Exhibition is now assuming such large proportions that increasing accommodation of the best possible sort has become a

Another noticeable improvement is the outdoor appearance of the grounds. Now that the Exhibition has been placed on a satisfactory financial footing there is no doubt but that the "powers that be" will pay more attention to landscape gardening. The natural beauty of Exhibition Park is hardly to be excelled in Canada or the United States.



Canadian National Exhibition—Exhibit of Imperial Varnish & Color Co.

necessity and it is hoped that the time is not far distant when the Horticultural, Machinery and various other exhibits will be housed in buildings approximating the palatial Manufacturers' and Liberal Arts Building, which compares favorable with anything of the sort not only only in this country but abroad.

There is, however, much room for further improvement and it must be confessed that one is inclined to heave a sigh when he remembers the magnificent effects in landscape gardening produced at the St. Louis Exposition this year. There is reason to believe the Toronto authorities are thoroughly imbued with the idea that the reputation



of "Toronto the beautiful" must be upheld, and that "The Canadian National Exhibition" must be second to none. Accordingly visitors to the Exhibition next year may look forward to seeing a wonderful transformation in the park.

#### A Golden Harvest for Toronto.

The Exhibition season has come to be a golden harvest for Toronto. Merchants report a big increase in the volume of business; the manufacturers are

#### The Exhibits.

Hardware and Metal readers found much to interest them in nearly all of the large industrial buildings. In Machinery Hall the demand for space has been so keen that many were unable to secure the full amount of space desired; every inch of the Stove Building was filled, and several stove exhibits were forced to other buildings; the Process and Implement Buildings were full to overflowing, and not a foot to spare was to be found in the Manufacturers Building.

Trunk, the Intercolonial and the Canadian Pacific railways have each creditable exhibits, the first consisting of a large series of scenic views taken at various points on the system; the second in charge of Mr. A. E. Barton, is similar in nature, and is winning the approval of all who visit the Transportation Building. The C.P.R. authorities have a building all to themselves, in which moose heads, buffalo horns, samples of grain and views of mountain scenery figure prominently. Thanks to them also, several pack horses with regular mountain outfits and riders make the rounds of the Exhibition daily, while Ojibway Indians ply their birch-bark canoes along the waterfront for the entertainment of pleasure seekers. The Gravenhurst Sanitarium authorities, moreover, are to be highly commended for having placed their institution before the public eye in such an attractive way.

Under the grand stand are a number of perfect models of British and Japanese battleships and cruisers as well as an extensive display of Canadian wild flowers. The growing west is written large in the Edmonton exhibit, which gives an easterner a fair idea of the vast agricultural resources of the district of Alberta.

The aesthetic tastes of Exhibition visitors have not been forgotten this year. In the Art Building is perhaps the most interesting collection of valuable paintings ever seen on public exhibition in Canada, His Majesty King Edward VII. having loaned for the occasion "The Death of Wolfe," while the public is indebted to Sir Henry Drummond, of Montreal, for a series of three large canvasses, all by leading European artists.

#### Imperial Varnish and Color Co.

One of the most impressive exhibits in the Manufacturers Building was that of the Imperial Varnish & Color Co., Toronto, which consisted of a pyramid of large proportions formed of a platform suspended on four varnish barrels and containing a comprehensive assortment of "Hollywood" prepared paints, "Elastilite," "Orolite," varnishes, dry colors, Kauri gum, etc. The pyramid was surmounted by a large banner showing the firm's name on both sides. A feature of the display which was particularly interesting to the trade and to expert painters was a number of walnut, maple, oak, mahogany, and pine panels varnished to a high degree of perfection with this firm's product. The display of dry colors in glass bottles of various sizes and designs served to emphasize



Canadian National Exhibition—Exhibit of The Metallic Roofing Co.

joyful over having placed their products in the most favorable light before the largest number of actual and prospective consumers that have ever visited the Toronto Exhibition; the factories are busier than ever owing to their output having to be materially increased; proper food has been provided for nursing the national commercial and industrial spirit among Canadian citizens, and lastly a means of annual education has been provided visitors to the Exhibition which it is difficult to overestimate.

Even the ground floor and first gallery of the old Main Building, now being used as Transportation displays, were well filled with various exhibits. Yet, notwithstanding the number of practically new buildings at the disposal of exhibitors, it was found necessary to devote the entire Annex to displays not provided for elsewhere.

#### From an Educational Point of View.

From an educational point of view the Exhibition this year is far ahead of any of its predecessors. The Grand





Canadian National Exhibition—Exhibit of Gurney Foundry Co.

the fact that this firm manufacture a full stock of this line. At one side the display was a glass case which was continually surrounded. In it was the carving of a Moari chief in Kauri gum from New Zealand. Around this were several big lumps of gum, the largest running as high as 25 pounds. At the base of the display were to be seen the largest Hollywood tins with which the hardware trade is so familiar from the Atlantic to the Pacific. The firm report the number of inquiries this year to have been exceptionally numerous, and feel that this exhibit will help not only themselves but their agents in the trade selling Hollywood goods to the public and to expert painters.

#### Metallic Roofing Co.

The exhibit of the Metallic Roofing Co. is by universal consent one of the finest at the Exhibition and reflects the greatest credit on that enterprising firm. The structure in which the exhibits are displayed is in itself a source of much admiration. It is a building of striking proportions in the Eastern style of architecture. Everything is constructed of metal, but it has the appearance of a stone structure, supported by marble pillars. The metallic roofing of the interior has evoked much admiration and is really a beautiful specimen of artistic workmanship. Inside on stands are displayed a circular group of samples of exterior and interior decoration in different styles and colorings. Another line that is displayed is the company's

eminently suitable for decorative cornice work.

#### The Gurney Foundry Co.

The exhibit of the Gurney Foundry Co. in the northwest corner of the Stove Building, was worthy of special note, embracing a large and varied assortment of their manufactures in stoves and ranges. The limited space afforded this company did not allow of their displaying a complete line of samples, but the effective arrangement of their leading lines was commented on very favorably by those interested in the stove trade. In the foreground at the entrance were displayed a line of the "Imperial Oxford" ranges, and it was most gratifying to hear the many expressions of commendation from the delighted users.

The line of "Chancellor Steel" ranges and their new dress was much admired, as were also the new "Coronation" ranges. This latter range is a graceful compliment to the ability of Canadian manufacturers to turn out goods of the highest quality in design and finish. A very pretty corner effect was secured with a line of "Oxford Laurel" base-burners, which looked quite resplendent in an handsomely ornamented nickel dress.

The hotel kitchen shown by this firm was one of the most interesting exhibits in the building. Two heavy duty hotel ranges, an Oxford carving table with nickel plated top, together with a dish-washing machine, completed a very comprehensive exhibit which served to illustrate the magnitude of the com-



Canadian National Exhibition—Exhibit of The Morlat Stove Co



pany's business. The sales made were very large, and many of the firm's agents throughout the country will find profits accruing to them as a result of the energetic efforts of the salesmen at

was popular with those wanting a moderate-priced stove. In addition to their ranges the firm had on display a variety of hot blasts, including a double heater which does unusually good work, and a

Stove Building what was probably the largest display of stoves in the building. The stove particularly favored in this exhibit was the "Home Treasure" range, the new features of which are its draw-out grate and ventilated oven, as well as its highly ornamented parts. This stove proved a popular one, and seemed to gain ground every day. In addition to the large variety of "Treasure" ranges and stoves, the firm had an attractive line of heaters, including the "Treasure" heater, which was shown in three distinctive lines and which proved one of the most popular stoves in the building. This firm gave away during the exhibition about 50,000 enameled trays, which were eagerly sought for especially by the ladies who, as is well known, have, as a rule, a deciding voice in the purchase of a stove. The results of the exhibition were in every way far ahead of the firm's expectations. As well as doing some missionary work, one hundred stoves were sold retail and arrangements completed with many of their agents in different parts of the country.

#### The Pease Foundry Co.

Conspicuous among the exhibits on the east side of the Stove Building was that of the Pease Foundry Co., the feature of whose display was their "Economy" warm air furnaces and hot water boilers. At one end of the exhibit was a 4-ton furnace for heating schools. Next to this was a compact little "Economy" for heating a house of four or five rooms; then an immensely heavy furnace for public buildings or houses up to twenty rooms; two smaller ones for houses of seven and ten rooms respec-



Canadian National Exhibition—Exhibit of D. Moore & Co.

the exhibit. The exhibit was in charge of E. J. Brewer, their sales agent, who had associated with him Mr. Hancock, their northern representative, and several of their Toronto dealers. Mr. Brewer states that the business done so far in the Oxford lines has far exceeded their most sanguine expectations, and their works are being run to the fullest capacity to meet the extraordinary demand.

small "Nugget" heater with suspended oven for small houses. During the exhibition a large staff was kept busy answering inquiries, meeting customers in the trade and in selling stoves.

#### D. Moore & Co., Limited.

The D. Moore & Co., Limited, Hamilton, had at the northeast corner of the

#### The Moffat Stove Co.

The display of the Moffat Stove Co., Weston, Ont., at the southwest corner of the Stove Building, was unquestionably one of the most effective in the building. The corner was artistically decorated, giving an appearance of permanency and attractiveness, which was strengthened by the handsome stoves exhibited. A new stove shown, the "Mikasa," a four hole steel cooking range, proved a popular one, the name being easily remembered, as a model of the "Mikasa" battleship, one of the finest ever launched, was shown in the collection of boat models and aroused great attention. The "Canada" steel range, already a favorite stove with householders, has a feature worthy of note in a hinged key plate, which does away with the smoke and odors of broiling. The "Classic," a cast iron stove with removable nickel parts, with a superb oven of unique design, attracted many buyers, while the "Prince National," second only to the "Classic,"



Canadian National Exhibition—Exhibit of Pease Foundry Co.



tively. Next to these was shown a design of the "Economy" combination heater, by which heating by both hot air and water at once is made most effective. At the west end of the display four hot water boilers in sizes for heating both public buildings and residences were shown. In the foreground of the display radiators for hot water heating were exhibited. The Pease display proved a most popular one with the trade as well as with the public, and the firm's representatives had many good opportunities of explaining the distinctive principles of "Economy" heaters.

#### The Walker Steel Range Co., Limited.

Less than a month old, yet of a pattern and finish that demonstrated manufacture by experts, the steel ranges and the heaters shown by the Walker Steel Range Co., Limited, Windsor, were from the first day to the last the objects of general interest by both trade and public.

This firm was organized last May with Hugh D. Walker, whose ability as sheet metal manufacturer has been recognized for many years, as president. Their specialty is a range named the "Walker Pilot," and as one of their representatives explained, it is well named, because it is "a pilot to success in the culinary art." It is a handsome steel range, differing radically from the

and one which is bound to revolutionize stove building. It provides a genuine old fashioned ash-pit, and an enamelled water reservoir tank. These features,

zine" for hard coal. All three varieties are fitted with exposed fire-pots, and are otherwise fitted with every modern improvement.



Canadian National Exhibition—Exhibit of Burrow, Stewart & Milne.  
(Adams Furniture Co., Toronto, Agents.)

and the addition of a profusion of handsomely nicked parts makes it at once a high-grade and an elegant range.

Two well recognized stove experts, Messrs. W. E. Anthony and Arthur B. G. Tisdale, who have taken a financial interest in the firm, were in charge of the exhibit, and both of them were kept busy explaining the advantages of steel ranges in general and the "Walker Pilot" in particular. This firm will also have an exhibit at the Western Exhibition at London.

#### Burrow, Stewart & Milne.

Although Burrow, Stewart & Milne, Hamilton, make a complete line of ranges, furnaces, etc., they restrict their display to "Jewel" gas ranges, of which they manufacture eighteen or nineteen different kinds. The feature of these ranges is their movable tops and burners, needle valves, which reduce the consumption of the gas by one third. A boiling oven is shown on the side of this range which is made with or without attachment for water heater. A "Jewel" water heater was shown in conjunction with this range which bears the record of being able to heat water in the bath room five minutes after the gas is lighted in the range. Many of the "Jewel" ranges were sold by the Toronto agents of the Burrow, Stewart & Milne Co., during the exhibition.

#### Clare Bros. & Co.

At the southeast corner of the State Building the exhibit of Clare Bros. & Co., Preston, was a constant source of activity during the fortnight of the exhibition. The features of the display were the



Canadian National Exhibition—Exhibit of The Walker Steel Range Co., Limited.

accepted idea in the matter of ranges. In architecture it is an innovation and embodies the Walker hearth construction, which is an entirely new feature

In the way of heaters the company are exhibiting the "Walker Oak" for coal or wood, the "Walker Hot Blast" for soft coal, and the "Walker Maga-



RETURNED

SEP 30 1904

Cut Boshel



Canadian National Exhibition—Exhibit of Clare Bros. &amp; Co.

Three favorite ranges, "Home Peninsular," the "Granite Peninsular," and the "Crystal Peninsular," and the "Hecla" furnaces, in which the iron and steel joints are fused at a white heat in one piece, making it absolutely safe, tight, a vital point in a furnace. In addition to these lines Clare Bros. & Co. had a full line of ranges and heaters of so attractive patterns that the sales were larger even than the firm anticipated. This firm has had an exceptional demand for their stoves, and any of the trade desiring to secure their goods should write early, as they are likely to be well sold up early in the season.

#### Ontario Lead and Wire Co.

As will be seen by accompanying photograph, the exhibit of the Ontario Lead & Wire Co. was one of the most elaborate, and to the person interested in plumbing trade or in having up to date and satisfactory plumbing appliances in the home it proved one of the most attractive in

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Canadian National Exhibition—Exhibit of The Pittsburg Perfect Fence Co., Limited.

reflection of three of them was shown in one of the bevelled plate-glass mirrors attached to one of the lavatories in the background of the booth.

#### Pittsburg Perfect Fence Co.

Farmers who ventured near the display of the Pittsburg Perfect Fence Co., of Hamilton, found difficulty in getting by without becoming interested in the fences shown by this firm. Not only was the fence one calculated to interest any farmer, but the genial Job Taylor, one of the most skilful salesmen in the business, was always on hand to show visitors the points of superiority in the "Pittsburg Perfect" fence. Many dealers who sell this fence made a point to visit the exhibit and to compliment the firm on the uniformly high quality of fence turned out.

RETURNED

SEP 30 1904

Cut Boshel



Canadian National Exhibition—Exhibit of Ontario Lead &amp; Wire Co.





Canadian National Exhibition—Exhibit of The Brantford Cordage Co., Limited.

#### The Brantford Cordage Co.

In a central position in the Machinery Building the Brantford Cordage Co., Brantford, Ont., had a large pyramid of "Gilt Edge," "Gold Leaf," "Silver Leaf" and "Maple Leaf" binder twine. This firm make a point to keep Canadian farmers interested in their product, and to keep their display in the memory of visitors they distributed great numbers of illustrated folders drawing attention to the quality of their twine. During the exhibition they were visited by many dealers who have found their brand a good one, and by others who were induced to stock up with it.

#### The Blackwell Varnish Co.

The Blackwell Varnish Co., Toronto, had in the gallery of the Transportation Building a display of particular interest to carriage painters as well as hardware dealers. In the centre was shown a large wheel, the spokes of which were brought to a beautiful finish in various colors. Back of this "Blackwell" varnish was shown in all sizes of cans. The quality of this firm's varnish has won for them an enviable reputation over a large part of Canada and they would like to hear from any of the trade desiring their agency.

#### The Eureka Refrigerator Co.

The exhibit of the Eureka Refrigerator Co., Toronto, is proving a big attraction to all up-to-date butchers and grocers, who visit the annex at the

entrance to the Exhibition grounds. Mr. F. W. Reed is in charge of the exhibit and takes particular pleasure in pointing out the many excellent features of Eureka butcher, grocer and domestic refrigerators respectively, the latter of which are made to order by the company. It is claimed for the "Eureka"

that its air chambers are entirely free from that humidity which is the weak point in many refrigerators to-day.

The "Eureka" company are feeling the results of the growing time and are now erecting a manufacturing plant in Toronto, to be completed by December next, which will be three or four times the capacity of the present one.

#### Canada Malleable Steel Range Co.

The Canada Malleable Steel Range Co., Toronto, made a strong bid for public favor with their display of "Canada's Pride" cooking ranges, made of polished and malleable iron, and so constructed as to ensure a perfect baking oven with a moderate fire. This firm are a comparatively new one, but are steadily getting a better connection on the Canadian market. They are seeking agents in all parts of the country, and would like any of the trade interested in a Canadian steel range to write them regarding their proposition.

#### The Globe Metal Polish Co.

Have a neat and artistic booth in the annex, in a white and yellow color effect, with rich green drapery, and a black background which serves particularly well to show off the graduated stocks of Globe Metal Polish packages. The commodity itself is used for polishing gold, brass, silver and copper, and the loquacious miss in charge of the exhibit in her own inimitable way seeks to impress upon all visitors that Globe



Canadian National Exhibition—Exhibit of The Blackwell Varnish Co.



Metal Polish is "non-inflammable, non-poisonous, non-injurious" and goes so far as to say "it is used by the coachman of King Edward's household."

#### Gutta Percha & Rubber Co.

The Gutta Percha & Rubber Mfg. Co., Toronto, held their usual space in the Manufacturers Building, but had increased space and a more attractive exhibit than last year. In their display were many lines of particular interest to the hardware trade, notably a big case of fire hose and nozzles; a pyramid of rubber belting, fourteen feet in height and containing all sizes from 36 inches to one inch; rolls of garden hose; the "Kelly" Springfield carriage tire; the "Fisk" detachable motor tire, etc. Plumbers' rubber supplies and connections were shown in great variety, and in such a way as to arouse general interest of the trade. "Maltese Cross" interlocking rubber tiling, sanitary durable and noiseless, and sheet and spiral rubber packing, were displayed to excellent advantage, while a case of rubber shoes and boots, and of rubbers, and a big pile of rubber heels, demonstrated the high-class productions in these lines made by the Gutta Percha & Rubber Mfg. Co.

#### The Page Fence.

The exhibit of the Page Wire Fence Co., Limited, Walkerville, Ont., was to be seen in the Farm Implement Building. This exhibit was striking and attractive. The chief and central feature of the exhibit was an immense pyramid made up of coils of wire fencing, containing in all two miles. On each side of this central pyramid was another



Canadian National Exhibition—Exhibit of Gutta Percha & Rubber Co.

pyramid composed of gates for the fencing. All three pyramids were tastefully decorated with flags. The exhibit was fenced in with the company's lawn fencing, consisting of three styles. On the front gate into the exhibit was hung an inscription which read: "You are welcome; if tired step in and rest yourself. Our exhibit will probably interest you." Inside the welcome expressed on the gate was carried out in the form of benches and chairs. There were also on exhibit photos of places and districts where the "Page" fences

have been put up. These fences are made of special high carbon wire; every horizontal wire is coiled, which adds to its strength and durability.

#### Western Foundry Co.

In addition to the various styles of the "Crown Huron" range and the "Huron" steel range shown last year by the Western Foundry Co., Wingham, Ont., this firm had in this year's exhibit a design of "Huron Chief" hotel range, with two fires and two ovens; their "New Ontario" camp steel cooker for coal or wood, and particularly suitable for the newer districts; their "Huron Fame" box stove, the "Premier Todd" heater, the "Royal Huron" and "Huron Manitou" wood cooker, and "Huron Red Hot" furnace, which has an extra large feed door and can burn any kind of wood or coal. This firm had a splendid position at the front of the Stove Building and were kept busy answering inquiries and received many orders for their goods.

#### Doherty Mfg. Co.

The Doherty Mfg. Co., Sarnia, Ont., caught the attention of the ladies to an exceptional degree by a guessing contest. They placed one of the most attractive stoves in a prominent position where the public could get an excellent chance to examine it. Then they invited all visitors to guess the weight of the stove, and the response was remarkable. At all hours of the day guesses were being given, the name of each contestant being given in each case. The firm took advantage of the opportunity thus presented to emphasize to in-



Canadian National Exhibition—Exhibit of The Page Wire Fence Co.





Canadian National Exhibition—Exhibit of Chas. Stark &amp; Co.

quirers the advantages of the "Decarbon Steel" ranges in their various patterns and sizes.

#### Chas. Stark & Co.

The only exhibitor of general sporting goods was Chas. Stark & Co., Toronto. The display was such, however, that anyone seeking sporting goods of any description could examine high class samples of the goods desired. A central feature of the display was a large glass case in the foreground of which were shown guns, rifles, hunting knives, ammunition, decoy ducks, and in the back boxing gloves, baseball mitts, balls, etc. Lacrosse, tennis, football, cricket and golf supplies, gymnasium equipment, snowshoes, in short, everything in sporting goods were shown.

In conjunction with this display there were exhibited several of the "World Famous White" sewing machines, the Canadian business in which is looked after by W. A. Doyer, senior member of the company. This firm sell both whole sale and retail, and would be pleased to send their catalogue, with discount, to any of the trade.

#### The Kurtze Acetylene Gas Co.

The Kurtze Acetylene Gas Co., of St. Williams, Ont., in many ways is one of

the most interesting on the grounds. It is unnecessary to dwell upon the nature of the acetylene gas generator; suffice it to say Mr. Kurtze claims for his machine that it is the most advanced and the safest made to-day. An attractive showing is made of 60, 40, 20 and 10 light generators, with stove and table attachments and all commodities derived from gas, in actual operation. "The Kurtze" generator was exhibited last year and was awarded a bronze medal.

Mr. Kurtze, who is a graduate of the Dual Polytechnic University of Brunswick, Germany, may be considered a mechanical genius. He has already built a large number of engines and is at present engaged in the construction of an automobile after an original pattern. Although a German by birth Mr. Kurtze has settled in Canada and will in all probability allow the land of the maple leaf its share of credit for the creations of his inventive brain.

#### Not At the Fair.

The Metal Shingle & Siding Co., Limited, Preston, Ont., did not have an exhibit at the exhibition this year. The reason will probably suggest itself to most of the trade. The fire which destroyed their works has so upset their calculations that they have found some trouble in looking after the large volume of business offered them. They were consequently unable to give the necessary time and attention to a display. They would, however, be pleased to hear from any of their friends in the trade, and as they are rushed forward their new works



Canadian National Exhibition—Exhibit of John Millen &amp; Sons



## Telephone City Stoves.

The Telephone City Stoves, Brantford, Ont., confined their display to hot blast stoves, yet with this comparatively small line they made an exhibit which compared favorably with exhibits in which all sorts of stoves were shown. This firm has been making stoves just a little over a year, but this time they have already demonstrated the advantages of Telephone City wood stoves and coal heaters. This firm distributed to inquirers hundreds of small booklets with illustrated descriptions of the many designs of their line, and succeeded in interesting considerable portions of the visitors to the Stove Building in their goods.

## The McClary Mfg. Co.

The McClary Mfg. Co., London, etc., had a choice position near the main door of the Stove Building. They restricted their exhibit to the "Sunshine" furnaces, the "Pandora" range, and their "London" enamelled ware. These furnaces and ranges are already too favorably known to readers of Hardware and Metal to need detailed description. The enamelled ware is a new product, how-



Canadian National Exhibition—Exhibit of Canadian Oil Co., Limited.

will soon be in a position to keep up with all orders. The demand for their line has been such that their new works will be larger and better than those destroyed by fire.

## Canadian Oil Co.

One of the most striking exhibits on the grounds was that of the Canadian Oil Co., Limited, Toronto. In the immediate foreground of this exhibit was a facsimile in paraffine of a drinking fountain presented by G. W. Chiles, of Philadelphia, to Stratford-on-Avon, in honor of Shakespeare. The clear whiteness of this fountain was such that few women could pass it without exclamations of delight. Back of this fountain was a stand on which "Sterling" paints and varnishes were shown in all sizes from pint up. The method of labelling Sterling paints by having each can painted the same color as the paint it contains, made possible a decidedly artistic arrangement on this stand. Varnish stains and house-hold enamels were shown on a table one side of this stand. The excellent quality of "Sterling" varnish was demonstrated by oak, walnut, maple, cherry, mahogany and ash panels brought to a beautiful polish by this varnish. Lubricating oils were shown to advantage in large bottles to the right of the wax fountain. In addition to attracting the attention of the ladies, the Canadian Oil Co. won their good will by presenting wax cups to all likely buyers and fancy cards to the children.



Canadian National Exhibition—Exhibit of Telephone City Stoves.



ever, the highest grade of ware ever produced by the company. In smoothness of finish, absence of defect and weight of coating, this ware compares favorably with the best ever offered on the Canadian market. It is now being shown for the first time, and the firm would be pleased to hear from any of the trade in regard to it.

#### C. Wilson & Son.

The feature of the exhibit of C. Wilson & Son of chief interest to the hardware man was their fine display of scales in Machinery Hall. They had a most complete line of their well-known scales on view, ranging from the chemist's scale, which registers the weight of a grain, to the huge railway weigher, capable of registering 100 tons. All their scales are made with a fine finish and their accuracy and durability are well known to the trade. Ball bearings and agates are used wherever practicable. This firm has been building scales in Toronto for the last 53 years and has achieved a reputation of which they may be justly proud.

#### The Worthington Drug Co.

This firm of agricultural chemists, hailing from the Royal City, are mak-

ing a creditable showing of stock tonics. One of the most striking things in the annex is a pyramidal pile of pails bearing the "Worthington" trade mark. The Worthington products are also dis-

played in packages ranged in horizontal rows in the background of the exhibit. In a conspicuous position are placed several cases of Sleeman's malt extract with pictures of the Guelph brewery added by way of decoration.

#### The Waggoner Ladder Co.

The Waggoner Ladder Co., London, Ont., exhibited at the east end of the Agricultural Implement Building their ladders, reels, etc., and were visited by many apple pickers, painters, tinner, farmers and householders, who were easily interested in their steel safety lock and steel wire reinforcement. Many housekeepers expressed the opinion that the "Davis" clothes reel was the cheapest, simplest and best yet; just what the woman of the house has been wanting. Many dealers visited this exhibit, several of them asking for the local agency for Waggoner goods.

#### R. Fletcher & Son.

R. Fletcher & Son, 1421 Queen street west, Toronto, exhibited an interesting fire saver. It consists of a small grate which sets on the top of the fire-box, thus, according to claims, doing the work with about 1/3 of fuel ordinarily taken by the furnace. The saving effected and the convenience of such a device in the winter weather is too obvious to require further discussion. R. Fletcher & Son would be pleased to correspond with any of the trade in regard to this.

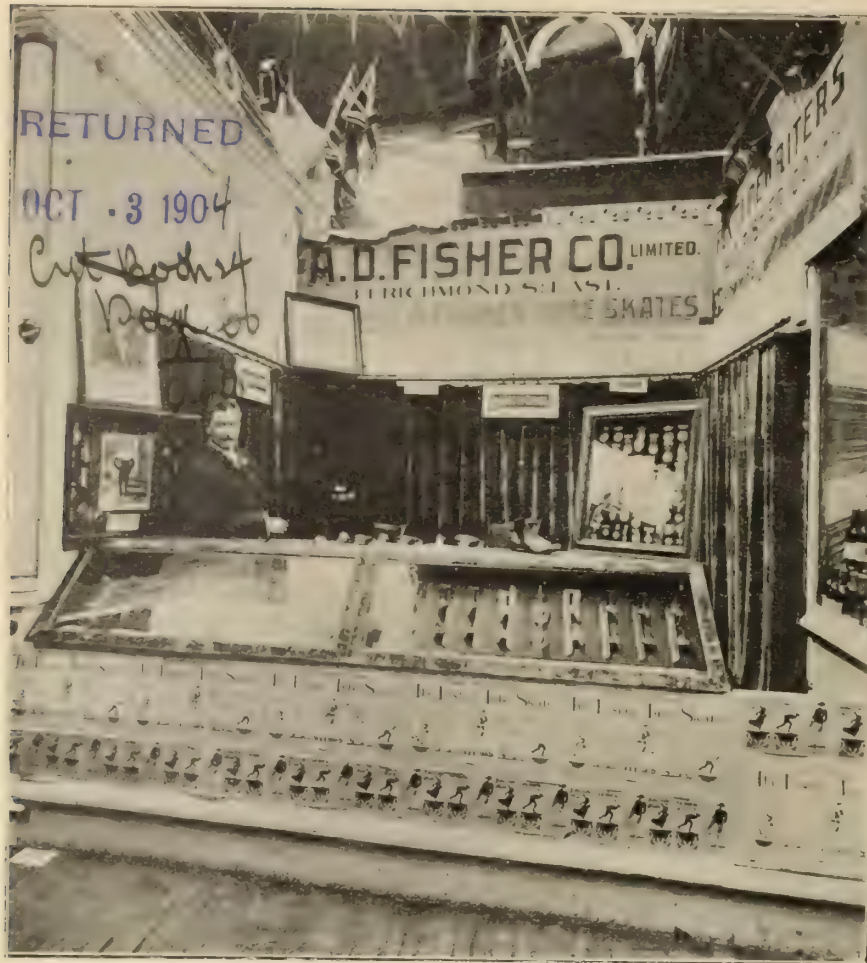


Canadian National Exhibition—Exhibit of C. Wilson & Son



Canadian National Exhibition—Exhibit of The Worthington Drug Co





Canadian National Exhibition—Exhibit of A. D. Fisher Co., Limited.

### The A. D. Fisher Co.

Tube skates have attained popular favor in all parts of the Dominion. The A. D. Fisher Co., Limited, Toronto, have from the first been pioneers in the manufacture of this class of skate. They have, too, brought the tube skate to a point of perfection that has won for it an enviable reputation with all speed skaters. The result was that the firm were able to show in their exhibits some of the most valuable medals ever presented for skating.

The exhibit was one that many of the trade took much interest in, and it is safe to say that many hardware dealers will be selling Fisher tube skates this year who in former years did not stock them. They are a good line to have.

### Gowans, Kent & Co.

An imposing display of glassware was shown at the handsome booth of Gowans, Kent & Co. The booth itself was built of solid oak with an attractive sign bearing the firm's name in gilt lettering. Inside the brass rail surrounding the exhibit were two handsome glass cases filled with beautiful specimens of cut glass articles. In the rear against large mirrors were displayed three more elegant

cases on a purple velvet covered stand containing a wide assortment of that elegant glassware so well known to the trade. On the top of these cases were ranged a number of handsome lamps, vases, etc., all in cut class. The whole formed a most striking and creditable display and in every way deserved the



Canadian National Exhibition—Exhibit of Gowans, Kent &amp; Co.

universal attention that was bestowed on it.

### The Guelph Foundry Co.

Favorable comment was aroused by the display of Grand Idea Ranges made by the Guelph Foundry Co. The ranges incorporate the latest improvements known to the trade, and in addition possess features peculiar to themselves. Dealers from all over Ontario visited this exhibit, which was situated upstairs in the Transportation Building, and they have pronounced the "Grand Idea" as one of the handsomest and most up-to-date range yet produced. Besides ranges this firm showed heaters, warm-air furnaces and hot water boilers, all of modern design.

### The Page Wire Fence Co.

The Page Wire Fence Co., Walkerville, Ont., were happy in securing a space in the implement building for their display. As one walked along any of the corridors of the building they would hardly fail to notice the handsome gates and fences around this exhibit, nor the samples shown inside. The interest aroused in the exhibit was exceptional, as the expert salesmen of the firm had a good fence to talk about, and did so to great purpose, leaving with each inquirer enough literature to sustain interest. If hardware dealers who sell The Page Wire Fence Co.'s goods will follow up the good work done by the company at the Canada National Exhibition there should be large increase in their sales.

### The Railing Stood the Test.

The Imperial Varnish & Color Co., Toronto, have around their exhibit a railing to which a beautiful mahogany finish was given last year. After the exhibition this railing was left standing.



When the booth was being prepared this year the railing was found to retain its beauty so well that no further attention was necessary. Thus another proof of the value of "Imperial" goods was given.

#### National Cash Register Co.

A centre of attraction is the commodious booth of the National Cash Register Co. It is square in formation with blue velvet hangings, a color which harmonizes beautifully with the metal exhibits. A fringe of the velvet edged with gold also hangs gracefully from the roof. On the floor space stands a number of square antique cabinets, the four sides of which display beautifully illuminated pictures of the company's factories and of various institutions established for the benefit of their employees. On each of these cabinets are displayed different styles of National cash registers. The firm's chef d'oeuvre is the National Multiple Register which is really six registers in one. It is built to be operated by six different clerks, each of whose transactions is separately recorded and affords a positive and complete check on every transaction of the day.

At the back of the booth against the velvet background are displayed individual component parts of a cash register, the number of which would probably surprise most people. In the National Multiple Register there are in the neighborhood of 3,000 separate and distinct parts, which explains, as the firm's notice says, "why good cash registers cost something."



Canadian National Exhibition—Exhibit of The Novelty Mfg. Co.

#### Imperial Steel & Wire Co.

The Imperial Steel & Wire Co., Limited, Collingwood, Ont., a comparatively new firm in the wire fence business, had an exhibit in the Process Building which

aroused much interest. Attention was attracted by a wire nail machine in operation turning out nails at a remarkable rate. Major John A. Currie, president and general manager of the company, and W. J. Lindsay, a director, made the most of an excellent opportunity to interest fence users in the new "Imperial" fence, a rigid and durable one, likely to have a large sale.

The Imperial Steel & Wire Co. is a new concern, which is beginning its operations under most favorable auspices. The company's head office is at Collingwood, and a branch office is located in the Temple Building, in Toronto.

#### Good for Cattle.

Stock raisers and farmers generally in Canada realize the value of medicated foods, and the proof is the extraordinary increase in the business of the International Stock Food Co. Started in Toronto about a year ago, Mr. F. B. Savage, the manager, has succeeded in building up such a trade that the company has decided to manufacture here on a large scale. It has bought the Red Lion block on Yonge street, near Bloor, with a floor space of 32,000



Canadian National Exhibition—Exhibit of The National Cash Register Co.





Canadian National Exhibition—Exhibit of Alonzo W. Spooner.

fect, and by the beginning of October will be able to meet all the demands of the trade. Hardware dealers will find this line an excellent one if they take an agency early and spend a small portion of their time in placing "International" stock food before their customers.

#### Alonzo W. Spooner.

The exhibit of Alonzo W. Spooner, Port Hope, in the centre aisle of the Manufacturers' Building, proved a great attraction to hardware and machinery men. The principal lines exhibited by Mr. Spooner were a powdered deodorant and disinfectant known as "Phenyle" and "Copperine," a non-friction, non-fibrous box metal.

In conversation with this paper Mr. Spooner, who is in charge of the exhibit, said that "Copperine" is being extensively used in some of the largest agricultural, milling and mining machines, pumps, dynamos on the North American Continent. Mr. Spooner has been selling "Phenyle" for ten years and is justly proud of the comparatively large market supplied by him with this disinfectant.

#### E. W. Gillett Co.

This exhibit deviated from the massive, substantial style characteristic of most of the larger booths, this year, in being open without canopy or roof. It

was screened off merely by a low white balustrade on an olive green foundation, with large palms at regular intervals. The floor space was spread with rich Oriental rugs and fitted with antique ebony chairs and divans. The rear was hung with green curtains and between the white supporting pillars are stacks of Imperial and Magic Baking Powders and Gillett's Perfumed Lye. In the

foreground rose imposing pyramids of Gillett's well-known products—capped with chandeliers bearing four immense electric lights. The exhibit as a whole had a luxurious, airy appearance which was enhanced at night by a great number of incandescent lights.

#### Eze Mfg. Co.

The Eze Mfg. Co., Toronto, has a neat little booth looking out over the south entrance to the Manufacturers' Building. The booth itself is covered with red, white and blue bunting, and the interior is stacked with pyramids of Star Ammonia, Washing Powder in red wrappers with gold lettering.

#### Packard & Co.

Jeckey colors, horse shoes, etc., are quite in keeping with the spirit of Packard's shoe dressing for various colors and qualities of leather and combinations of liquid and paste, so familiar to all. Packard & Co. have a compact, but artistic exhibit with color effect in black and yellow—a sort of open lattice at the sides being formed of satiny black oblong horseshoes. The walls are suitably decorated with pictorial testimonials and piles of Packard's shoe dressings.

#### The McLachlan Gasoline Engine Co.

The McLachlan Gasoline Engine Co., Limited, Queen street east, Toronto, made an exhibit of stationary and portable gasoline engines in the Machinery Hall. This firm manufacture station-



Canadian National Exhibition—Exhibit of The E. W. Gillett Co.



ary, portable and marine styles of engines and make a specialty of complete gasoline threshing outfits. The exhibit consisted chiefly of portable engines for threshing, etc.

#### Dunlop Tire Co.

As will be seen from the accompanying photograph, the exhibit of the Dunlop Tire Co., Toronto, was one of the most striking in the Manufacturers Building. The exhibit was a booth, the front of which was formed to make a horseshoe, to emphasize the fact that the Dunlop Tire Co. are headquarters for "Ideal" horse pads, which were shown in a large pile at the back of the booth. "Comfort" heels, interlocking floor tiling, rubber matting, carriage and motor tires, rubber hose, etc., were also shown to excellent advantage, the whole exhibit being as attractive inside as it was striking from without. In the Transportation Building a superb display of carriage and bicycle tires were shown to advantage, the position being particularly effective for the display of carriage tires. Many hardware dealers who handle "Dunlop" lines visited the displays made by the firm. Those who did not are invited to send in for samples of their Canadian-grown peanuts. They are the newest thing offering to-day.

#### Canada Bearings, Limited.

The exhibit of the Canada Bearings Limited, Hamilton, Ont., consisted of Wright's taper-roller bearings. These bearings are specially adapted for bicycles and road vehicles of all kinds. The bearing consists of a full series of taper shaped rollers, having a free roll around the shaft. It is most simple in construction, having very few parts.

#### Exhibit of Transformers.

The Canadian Westinghouse Co., Limited, Hamilton, Ont., had on exhibit two 50 light 17.5 ampere constant current air cooled regulating transformers. These transformers operated 100 Westinghouse new type series, enclosed alternating current lamps distributed around the buildings.

#### Shovels Cheaper.

The new list price on "Olds" shovels is \$10.50 per dozen, a decrease of \$1. The discount remains 45 per cent., as before.

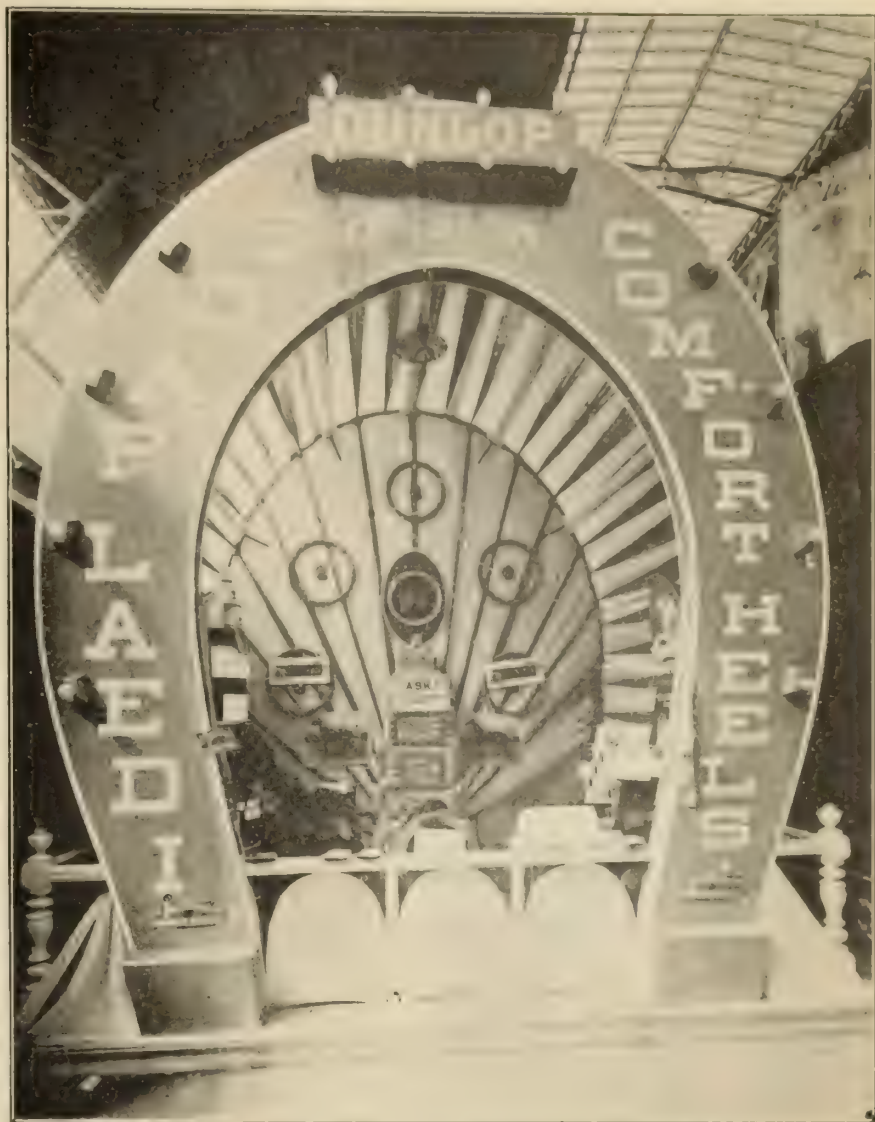
#### FIRST SHIPMENT.

A G.N.W. press despatch of September 6 said that the first shipment of steel rails was made from the "Soo" mills on that date, when 1,000 tons of rails were loaded on steamer Neepawaka, to be landed at Montreal for the Intercolonial Railway.

#### SCRAP IRON FOR FOUNDRY

"SCRAP IRON" is the name usually given to the miscellaneous collection of broken and worn out castings used along with pig iron in making foundry mixtures. However, strictly speaking, the term applies more appropriately to the conglomeration of iron known as "foreign scrap." It is obtained from the junk dealer, who makes a business of collecting such material.

In order that the different material may be controlled by specification if necessary, W. G. Scott, at the request of the American Foundrymen's Association, has made the following classification of foreign scrap: First, light machinery scrap (gray iron), second, heavy machinery scrap (gray iron), third, stove plate scrap (gray iron), fourth, car wheel and chilled iron (gray iron), fifth, cast borings, sixth, malle-



Canadian National Exhibition—Exhibit of The Dunlop Tire Co

Under the name of "foreign scrap" the following kinds of materials may be included: gray iron, chilled iron, malleable iron, cast borings, steel, wrought iron, steel or wrought iron borings. The common gray iron founder will prefer a good grade of gray iron scrap; the malleable iron founder will wish to include steel scrap with the gray iron; the malleable metal maker will want wrought iron, and the cast steel producer will require something else.

able iron scrap; seventh, steel scrap; eighth, wrought scrap; ninth, mixed scrap.

#### LIGHT MACHINERY SCRAP

This class of scrap will include broken parts of agricultural implements, sewing machines, ornamental iron work, cast fixtures, etc. The most of the material will be less than two inches in thickness, and consequently it will be sort. The average analysis will be



within the following limit: silicon, from 2 to 2.6 per cent.; sulphur, from .075 to .095 per cent.; phosphorus, from .7 to 9 per cent.; manganese, from .2 to .6 per cent.; and carbon, from 3 to 4.25 per cent.

This kind of scrap is considered superior to all other grades for general gray-iron work. It increases the strength of soft iron mixtures and produces but little slag, unless much rust be present, in which case there is a tendency for the metal to harden, and the rust unites with the slag to form silicate of iron, which is an undesirable element in good cupola practice. The usual amount of scrap used in melting is from 30 to 50 per cent., depending upon the quality of casting desired. Some foundrymen use all scrap with a little ferro-silicon soft-

from .075 to .15 per cent.; phosphorus, from .4 to .8 per cent.; manganese, from .3 to .9 per cent.; and carbon, from 2.75 to 4 per cent.

This scrap is intended for heavy work and should be melted in a large cupola. The amount used in melting varies from 20 to 60 per cent.

#### STOVE PLATE SCRAP.

Old stove plate contains burnt iron and an unlimited amount of rust, and for that reason is objectionable, and some foundrymen will not use it at all. New stove plate is an excellent soft scrap because of the high silicon, graphite and phosphorus content, but it is very scarce and consequently high in price; very little is found on the scrap market. Old stove plate, consisting of

and the consequent strength. The analysis will yield results as follows: silicon, from .5 to 1.75 per cent.; sulphur, from .075 to .15 per cent.; phosphorus, from .3 to .65 per cent.; manganese, from .3 to .9 per cent.; and carbon, from 2 to 3.75 per cent.

#### LAST IRON BORINGS.

Cast borings can hardly be considered as a legitimate scrap iron; and the majority of foundrymen do not wish them. The reason for this is that because of the fineness of the particles much of the iron is lost in melting, either by being burned up or oxidized. In some cases the loss is 30 per cent., and in the most favorable cases is not less than 10 per cent. Many are the methods that have been tried, with very little success, to melt cast borings economically. The ideal method of melting is by means of an air furnace or the open hearth furnace, in which event the iron takes up very little sulphur, although there is quite a loss from oxidization. In general foundry practice the best method of melting borings is in a cupola, packing the material in wooden boxes. The average analysis is as follows: Silicon, from 1.5 to 3 per cent.; sulphur, from .075 to .165 per cent.; phosphorus, from .3 to 1.25 per cent.; manganese, from .2 to .9 per cent.; and carbon, from 2.5 to 4.5 per cent.

#### MALLEABLE IRON SCRAP.

There is very little call for malleable iron scrap among gray iron founders, and the malleable iron men are somewhat adverse to using anything except that which they are familiar with, especially in the annealed form. Every class of scrap from light machinery to car wheels contains various amounts of malleable iron castings, and it is impossible to make a fine distinction in the matter. Malleable scrap is not liked by the gray iron founder because of the low phosphorus and low silicon. In a gray iron casting it is desirable to use an iron containing not less than 3 per cent. of phosphorus, and for light castings .7 per cent. is preferable. The average limits of a malleable iron analysis will be as follows: Silicon, from .3 to 1.75 per cent.; sulphur, from .035 to .095 per cent.; phosphorus, from .011 to .22 per cent.; manganese, from .15 to .50 per cent.; and carbon, from 1.85 to 1.25 per cent.

#### STEEL SCRAP.

Steel scrap is coming into use more and more every day. It used to be considered an impossibility to melt steel in the cupola and have it mix with the cast-iron, but now it is common practice. Many foundrymen are melting from 10 to 40 per cent. of steel scrap. With a little experience a perfect mixture can be obtained. The object in



Canadian National Exhibition—Exhibit of Canadian Aluminum Works.

ener and a small amount of ferro-manganese; but such mixtures are uncertain and cannot be controlled. High machinery scrap if sorted costs almost as much as pig iron.

#### HEAVY MACHINERY SCRAP.

This scrap, as the name implies, will consist of large pieces from fly-wheels, engine beds, large pumps, blowing machinery, mining machinery, gears, cast die blocks, mill castings and architectural castings. The pieces are of too large a size for the ordinary cupola, and since the breaking of heavy castings is a serious problem, the preparing for the cupola is no small expense. The average analysis will usually be found to be within the following limit: silicon, from 1.6 to 2.2 per cent.; sulphur,

old stoves and furnace castings, is, however, cheap. The common stove plate scrap will generally analyze within the following limits: silicon, from 2.3 to 3.3 per cent.; sulphur from .075 to .135 per cent.; phosphorus, from .45 to 1.25 per cent.; manganese, from .2 to .7 per cent.; and carbon, from 3.5 to 4.5 per cent.

#### CAR WHEEL AND CHILLED IRON SCRAP.

Car wheel scrap is a very desirable material for strong and hard cast iron fixtures. There is an objection, however, to this class of scrap for ordinary foundry practice because of the large size of the pieces; but for large cupolas this drawback is not felt. This scrap is considered a superior grade of cast iron because of the low phosphorus content



using steel scrap is to reduce the amount of graphitic carbon, thereby producing a hard, strong, close grained iron. In charging steel scrap in the cupola it must be borne in mind that no small pieces be used, as such pieces seldom melt, and consequently mix with the iron, producing hard spots. Steel rail cut into 16 to 24-inch length is considered the best scrap, but of course steel castings, clippings, etc., are included under steel scrap. The following is an average analysis of mixed steel scrap: Silicon, from .00 to .75 per cent.; sulphur, from .005 to .125 per cent.; phosphorus, from .005 to .25 per cent.; manganese, from .10 to 1.50 per cent.; carbon, from .15 to .90 per cent.

#### WROUGHT IRON SCRAP.

There is very little call for this class of metal. It is used in a limited way in the manufacture of malleable metal, which once was in demand but has recently been supplanted by modern steel castings. The high melting point of wrought iron prohibits its use in the cupola, although some foundrymen use a small amount, about 20 lbs. to 2,000 lbs. of pig iron. However, steel scrap answers this purpose just as well and is more easily melted. The general analysis of wrought iron is: Silicon, from .008 to .15 per cent.; sulphur,

from .008 to .045 per cent.; phosphorus, from .001 to .35 per cent.; carbon, from .00 to .10 per cent.; manganese, from .00 to .10 per cent.; graphite, from .00 to .05 per cent.; slag, from .01 to 1.20 per cent. An ideal wrought iron should be very low in everything except pure metallic iron.

#### MIXED SCRAP.

This class of scrap includes "any old thing" from tin can to anvils or cannon. Such material is collected by junk dealers and sorted afterwards into the different classes.

At present no fine distinction is made in regard to the classification by small or jobbing foundries, but large manufacturers are more particular and are beginning to insist on some form of sorting. Evidently the tendency is along this line and will result eventually in the scrap being carefully sorted by the scrap dealer, resulting in the grading of prices according to the grade of scrap. Every foundryman is inclined to use scrap, preferring it to gray forge at the same price. As a rule a mixture containing scrap produces a stronger cast iron than an all pig mix. There are several reasons for this, one of which is that the graphitic carbon is in a finer state of division than in pig iron. Another reason is that the total carbon is reduced by addition of scrap, which

acts like steel in this respect. Steel being free from silicon and graphite, it reduces the total silicon and carbon in the mixture. An excess of carbon, especially graphite, produces a soft, weak iron, but upon the other hand, if the carbon is reduced to a minimum the result is a hard, brittle iron. Making an all scrap mix by analysis is a difficult proposition, but it is being done every day with apparent satisfaction.

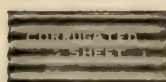
#### NEW INDUSTRY FOR MONTREAL.

An important development in the lead producing industry in Canada is announced in the news that a large lead corroding industry is about to be established in Montreal.

For some weeks past Mr. Barber, of The Carter White Lead Co., of Chicago and Omaha, has been in the city, and has concluded arrangements for the lease of the large Delormier avenue shops of the C.P.R., lately vacated. It is understood that very satisfactory arrangements have been completed with the C.P.R. for the carriage of the lead ore from the British Columbia mines to Montreal, and it is proposed to start the corroding of the lead on a large scale at the earliest possible moment. This new industry is a direct result of the lead bounty recently given by the Dominion Parliament on Canadian produced lead.



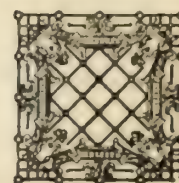
CEILING PLATE, No. 560



SAFE LOCK SHINGLE



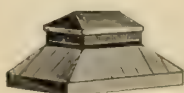
CRIMPED SHEET



CEILING PLATE, No. 557

WE HAVE A COMPLETE LINE OF

## METAL BUILDING GOODS



With which any dealer can build up a lucrative business. Our travellers work with the trade and help them to close orders, and we try and make each transaction a stepping-stone to further business.

We are adding new Ceiling Goods and a line of Water Bowls and Stanchions for Cattle Barns, which will be a profitable line for the trade in agricultural districts.



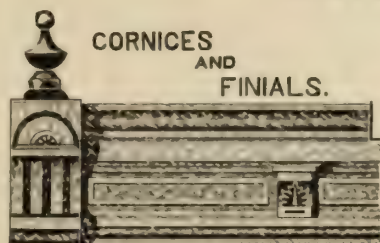
ELBOWS

**The Metal Shingle & Siding Co.,**  
Preston, Ont. **LIMITED**

Western Agency:  
ELLIS & GROGAN, CALGARY.

Manitoba Agency:  
CLARE & BROCKEST, WINNIPEG.

Montreal Agency:  
J. B. DAGENAIS, 953 St. James St.



CORNICES  
AND  
FINIALS.



WINDOW & DOOR CAPS.



PRESSED BRICK.



# Canadian Wholesale Hardware Association

The Sixth Annual Convention.

SIX years ago the Canadian Wholesale Hardware Association was, as one of its members has well said, formed at Hamilton "with great fear and trembling," but its short history has been long enough to convince even the most skeptical that it has justified the hopes of its promoters. It was formed to include all or nearly all of the jobbers of hardware in Ontario and Quebec, and from its inception it has had a beneficial effect on hardware trade conditions. At first it was regarded with suspicion by some retailers, but as it became apparent that it was by no means a combine and that its members still remained competitors, the retail trade have recognized that its influence has been almost entirely good. From the first it has exercised a steadying influence on prices and has to a great extent prevented cutting of prices. This is a benefit to the retail trade and is so recognized by them.

At the annual meeting held at the Windsor Hotel on September 7 and 8, a project to form a national association to include the wholesale hardware houses of the Maritime Provinces, of Manitoba and of British Columbia as well as Ontario and Quebec was discussed. The election of officers resulted as follows:

President John Bowman, of John Bowman Hardware & Coal Co., London.

Vice President Thos. Birkett, M.P., of Thos. Birkett & Sons Co., Ottawa.

Secretary Treasurer James Hardy, of Jenkins & Hardy.

Executive Committee—A. Jeannotte, of L. H. Hebert, Montreal; A. Letang, of Letang Hardware Co., Montreal; Gordon Seybold, of the Seybold, Sons Co., Montreal; Victor Lemieux, of N. Lemieux & Fils, Quebec; C. A. Whitman, the Hobbs Hardware Co., London; Past President Wm. Vallance, of Wood, Vallance & Co., Hamilton; Past President T. H. Newman, Caverhill, Learmont & Co., Montreal; Past President W. Starke, Stark Hardware Co., Montreal; Past President T. B. Lee, Rice, Lewis & Son, Toronto; Past President F. O. Lewis, Lewis Bros. & Co., Montreal; Sec'y Treas. James Hardy.

## THE BANQUET.

On Wednesday evening the members of the association and others were the guests of F. O. Lewis at the president's

sixth annual banquet held in the Canada Club, Board of Trade Building. That it was an unqualified success, the greatest success of any yet held, was the opinion freely expressed by the guests. A thoroughly enjoyable evening was spent, most of the speeches being of the free and easy style and two or three being of a high order of merit. Wm. Starke and John Taylor were the life of the party, the vocal selections of the latter delivered at frequent and opportune moments being particularly amusing and entertaining. "Billy" Starke's popularity at such gatherings is always in evidence. The list of invited guests is as follows:

Samuel A. Bigelow, Bigelow & Dowsley, Boston.

John C. Koch, John Pritzlaff Hardware Co., Milwaukee.

Brace Hayden, Dunham, Carrigan & Hayden Co., San Francisco.

F. H. Whitton, Ontario Tack Co., Limited, Hamilton.

C. A. Binge, Canada Sew Co., Hamilton.

A. W. Taylor, Parmenter & Bulloch Co., Limited, Gananoque.

J. D. Chaplin, Welland Vale Mfg. Co., St. Catharines.

S. O. Greening and R. H. Merriman, B. Greening Wire Co., Hamilton.

James Maxwell, D. Maxwell & Sons, St. Marys.

W. W. Cox, Whitman & Barnes Mfg. Co., St. Catharines.

W. H. Wortman, Wortman & Ward Mfg. Co., Limited, London.

G. A. Childs, U. S. Steel Products Export Co., Montreal.

J. A. Farrell, U. S. Steel Products Export Co., New York.

M. H. Day, Consumers Cordage Co., Montreal.

J. C. McCormick and A. E. Hanna, Dominion Wire Mfg. Co., Montreal.

T. Esmond Peck, Peck Rolling Mills, Limited, Montreal.

H. G. Wright, E. T. Wright & Co., Hamilton.

J. R. Wilson, Thos. Robertson & Co., Montreal.

J. M. H. Robertson, Jas. Robertson Co., Montreal.

W. McMaster, and J. R. Kinghorn, Montreal Rolling Mills Co., Montreal.

John H. Tilden, Gurney Tilden Co., Limited, Hamilton.

C. J. Shurley and J. C. Dietrich, Shurly & Dietrich, Galt.

C. Britton, Cowan & Britton, Gananoque.

John M. Taylor, Taylor, Forbes & Co., Guelph.

W. Small, Canada Horse Nail Co., Montreal.

W. L. Gummer, Dowsell Mfg. Co., Limited, Hamilton.

T. James Fernley, 55 Commerce St., Philadelphia.

J. P. Steedman, Gurney Scale Co., Hamilton.

F. J. Skinner, Skinner Co., Gananoque.

J. M. Robertson, Thos. Robertson & Co., Montreal.

J. M. H. Robertson, Jas. Robertson Co., Montreal.

A. L. Sykes, Canadian Cordage & Mfg. Co., Peterboro.

H. Brainard, Dominion Cartridge Co., Montreal.

John McGill, Jas. Smart Mfg. Co., Brockville.

Colonel Colin McArthur, A. McArthur & Co., Montreal.

D. W. Lockerby and D. H. McComb, Lockerby & McComb, Montreal.

A. A. Brown, McClary Mfg. Co., Montreal.

Jas Davidson and E. Goodwill, Thos Davidson Mfg. Co., Limited, Montreal.

Walter Goose, Montreal.

Robt. Munro and H. W. Aird, Canada Paint Co., Montreal.

A. Ramsay, A. Ramsay & Son, Montreal.

C. C. Balantyne, Sherwin Williams Co., Montreal.

George Gillespie and T. H. Watson, Toronto Bolt & Forging Co., Toronto.

W. J. Land, Independent Cordage Co., Toronto.

A. E. Kemp and W. A. Kemp, Kemp Mfg. Co., Toronto.

Geo. W. Howland, Graham Nail Works, Toronto.

Fred Somerville, Ontario Lead and Wire Co., Toronto.

Wm. Vallance, Geo. Vallance and S. H. Alexander, Wood, Vallance & Co., Hamilton.

John Bowman and A. J. Daly, John Bowman Hardware and Coal Co., London.

T. S. Hobbs and G. A. Whitman, Hobbs Hardware Co., London.

George Caverhill and T. H. Newman, Caverhill, Learmont & Co., Montreal.

Edward Archibald and G. C. Davis, Frothingham & Workman, Montreal.

L. H. Hebert and A. Jeanotte, L. H. Hebert, Montreal.

W. Starke and Robert Starke, Starke Hardware Co., Limited, Montreal.

D. H. Howden, D. H. Howden & Co., London.

A. Letang, Letang Hardware Co., Montreal.

James G. Lewis, Lewis Bros. & Co., Montreal.

J. P. Seybold and Gordon Seybold, Seybold & Sons Co., Montreal.

Thos. Birkett, sr., and Thos. Birkett, jr., Thos. Birkett & Sons Co., Limited, Ottawa.

W. Shaw, E. Dupre and E. Chinic, Chinic Hardware Co., Quebec.

J. S. Lemieux and Victor Lemieux, V. Lemieux & Fils, Quebec.

P. Howland and T. G. Dexter, H. S. Howland, Sons & Co., Toronto.

A. Burdett Lee and Thomas Lee, Rice, Lewis & Sons, Limited, Toronto.

S. R. Kennedy, Kennedy Hardware Co., Limited, Toronto.

D. Madore and D. Deschamps, D. Madore, Montreal.

A. M. St. Arnaud, Canada Hardware Co., Limited, Montreal.

R. Haldimand and Geo. Haldimand, W. L. Haldimand & Son, Montreal.

W. S. Leslie, A. C. Leslie & Co., Montreal.

H. W. Dorken, Dorken Bros. & Co., Montreal.

Geo. Kohl, B. & S. H. Thompson, Montreal.

Watson Jock, Montreal.

J. A. Parkes, Montreal.

H. R. Ives, H. R. Ives Co., Montreal.

James Crathern, Montreal.

S. H. Ewing and S. W. Ewing, Montreal.

H. McTavish, Montreal.

W. B. Convers, Consumer's Cordage Co., Montreal.

H. J. Eadie and G. C. Davis, Frothingham & Workman, Montreal.

F. W. Lamplough, A. Lyman and I. L. Clarke, Montreal.

C. M. Strange and C. Smallpiece, Lewis Binn & Co., Montreal.

H. J. Fuller, Fairbanks Co., Montreal.

Secretary James Hardy, Jenkins & Hardy, Toronto.

Col. J. B. MacLean and F. R. Munro of HARDWARE AND METAL.

When justice had been done to a substantial menu, President F. O. Lewis rose at 9.30 to propose the toast to His Majesty, which was honored in regular form. Mr. Lewis then called upon Secretary Hardy to read letters and telegrams of regret from guests unable to be present.

Samuel A. Bigelow, president of the National Hardware Association of the United States, wrote as follows:

My Dear Mr. Lewis:

I am sorry to send my regrets to your very kind invitation to be present at your dinner next Wednesday, for I would be delighted if I could be with you.

Your former gatherings have been heralded as the acme of good fellowship, and may your present meeting serve to bind your members closer together in their business life by fostering the principles of brotherly love and confidence.

I shall hope to see you with a goodly delegation from your association at our



annual convention at Atlantic City, November 16th.

Very sincerely,  
SAMUEL A. BIGELOW.

The following telegram was read from J. A. Farrell, president of the United States Steel Product Export Co.:

Dear Sir:

Very much regret inability to attend hardware dinner this evening. Please carry my best regards to members present; wish you all continued prosperity.

J. A. FARRELL.

The following letter from C. J. Shurly, of Shurly & Dietrich, Galt, created much amusement. The humor was much appreciated:

Dear Sir:

Many thanks for the kind invitation to your annual banquet on the 7th. Mr. Dietrich also wishes me to convey his thanks for the same. We regret our inability to be present at so enjoyable, instructive and festive an occasion. We shall be with you in spirit (not Walker's or Seagram's) but spiritually, if not in person.

F. O. LEWIS.

President Lewis, on rising, was greeted with prolonged applause, which was a striking tribute to his popularity among his fellow members of the hardware trade. He stated that his remarks would be brief, merely a few words with reference to the year of his presidency. He congratulated the association on their sixth annual meeting and on the attendance at all the meetings during the year. He was pleased to report the finances of the association in good condition. He considered the trade outlook good as crops in the east were fair and in the west very good. The revival of the steel industries of the country was also an encouraging sign. The increased immigration is giving Canada what she most needs—population. For some time the hardware trade had been in difficulty as they were selling goods on a falling market, but better conditions are looked for after the United States Presidential elections.

He was glad to report that the retailers now recognize that the association is of benefit to them and also that the manufacturers are leaving the distribution of their goods more in the hands of the jobbers. It was his painful duty to refer to the death of A. B. Lee, of Toronto, a respected member of the association.

"OUR COUNTRY."

With the toast "Our Country," President Lewis coupled the names of Wm. Vallance and T. H. Newman.

Mr. Vallance said that the inspiring strains of the Maple Leaf helped him to express what he thinks of Canada. We

Canadians are only now beginning to appreciate our country and to understand that it is on the eve of an immense development. It was an honor, for which he was grateful, to be asked to respond to this toast. It was a pleasure to meet his brethren of the trade, for such meetings tend to the mutual benefit of manufacturer and jobber. He would conclude by calling for three cheers for Canada, which were given with a will.

T. H. Newman, after protesting that he was totally unprepared, made an excellent patriotic speech. His statement that the man who does not believe in Canada and is not proud of his country has no right to live in it was cheered to the echo. The speaker referred to the boundless resources of Canada yet undeveloped, her magnificent system of waterways, her great mineral resources. The export trade of Canada per capita was surpassed by no other country in the world of equal population. The banking system of this country is better, he said, than that of the United States, its safeness and elasticity being the principal features commended. Any deserving merchant can readily secure the banking assistance he requires. The railways of the country were referred to, the work of the C.P.R. in developing the great Northwest is something to which Canadians point with pride.

He was glad to welcome the manufacturers and paid a tribute to the great Canadian Manufacturers' Association.

"OUR ASSOCIATION."

The toast "Our Association" was responded to by the past presidents present.

P. Howland appreciated the honor of being called on to reply to this toast, but thought its importance should warrant some preparation. There was none more important except that of "Our Country." This association is an example to the trade of the country. It is still young but already very much has been accomplished. The members came together as strangers and they are now friends. "We are still competitors, but I believe we are all honorable competitors. I believe in reasonable competition, for I believe it is the life of trade, but unreasonable competition is the death of trade. I am thoroughly opposed to all underhand methods of acquiring business, and our association has done away with any such methods. It is a comparatively

small one, but to-day we have been discussing ways and means of enlarging its area to include others provinces besides Quebec and Ontario."

The speaker believed a large association would do even better work; if the present association had accomplished nothing more than the shortening of the terms of credit it had amply justified its existence.

T. B. Lee, who, with Mr. Howland, was leaving by the night train for Toronto, spoke briefly. He believed in the association, for it had brought competitors together to discuss their mutual interests and yet had demonstrated conclusively to the trade that they were no combine. The speaker bore eloquent testimony to the success of the association under the presidency of F. O. Lewis. Many different problems had been solved during the year by his good judgment and tact. He wished to thank the manufacturers for the support which they had given the association. Without their co-operation the jobbers could not have succeeded in making their organization what it is to-day.

Past President William Starke, who was accorded an enthusiastic reception, spoke briefly. He could only repeat what Messrs. Howland and Lee had said. He believed in the association and predicted its continued success.

T. J. FERNLY.

T. J. Fernly, secretary of the National Hardware Association of the United States, was the next speaker. As a representative of the United States Hardware Association it was a pleasure for him to see the signs of growing prosperity of the Canadian Association. He had to thank them for sending accredited and creditable representatives from their association to the great convention at Atlantic City last November. He hoped they would send a delegation again this year and he would suggest that they make it a "committee of the whole."

He could not see that the United States Association could teach the Canadians very much. He had had the pleasure of being present at the meeting during the day and he admired the way in which the members had grappled with their business problems. He was also glad to see the good spirit which prevailed between the manufacturer and the jobber in Canada. It was a case of the lion lying down with the lamb.

He concluded with a pressing invita-



tion to the members of the Canadian association to be present at the Atlantic City convention in November.

#### OUR MANUFACTURERS.

E. F. Jones, who was the first to reply to this toast, spoke briefly. He said that the manufacturer is anxious to maintain prices at a good figure, but it is not always possible to do so. It was a poor time for shovels. The manufacturer is in the hands of the jobber.

Cyrus A. Birge desired the sympathy of his audience on three grounds. In the first place he had been given no notification that he was expected to speak. This was according to previous custom, but he hoped that in the future notice would be given to the speakers, for this association is an important one and the utterances of its members should be spread largely through the country. In the second place it was after dinner and he did not feel like speaking. Thirdly, he thought some older manufacturers could do more justice to the theme.

He was glad the association was considering the extension of its territory, for surely a Dominion association could do more than one confined to two provinces. Reference had been made to the friendly meeting of manufacturer and jobber. They often met during the year when the jobber wanted an extra 5 per cent, which it was often impossible to grant. But such meetings helped them to understand each other.

Mr. W. W. Cox spoke briefly, and paid a tribute to President Lewis. He thanked him for the honor he had done him in coupling his name with this toast.

#### JAMES CRATHERN.

President Lewis then called upon James Crathern as the oldest hardware man present to tell something of the old days when hardware jobbers made large profits.

Mr. Crathern in an interesting and reminiscent address entertained the gathering with an account of old hardware days. There was no hardware association in his day. Seeing such amiability among the members he was led to inquire whether they were to meet on Thursday morning to divide their profits.

Very few members of the association were born, when, 60 years ago, he was an apprentice in a hardware store. In those days, all business was done between May and November. Nearly all supplies came from England. The

first three months of the year business was slack and in April the clerks put in time playing whist.

Until the opening of the Grand Trunk Railway, a turn over of £75,000 per year in a wholesale hardware business was considered something very large. He understood that with the growth of the country and the extension of the railway systems his hardware jobbing friends counted their turnover in the millions.

#### THE LADIES.

The toast of "The Ladies" was responded to briefly by T. Esmond Peck and Arthur Lyman.

#### THE VICE-PRESIDENT.

Mr. Bowman said that the vice-president was expected to sit in the shadow of the president and at this late hour he would not attempt a speech. He was glad to see Mr. Fernley at this dinner and as a Canadian representative at Atlantic City last year he desired to bear testimony to the reception which he and his colleagues had been accorded.

Turning to the subject of Canada and her resources Mr. Bowman said that he had been privileged to travel on the first C.P.R. train across the continent. Few Canadians in the east realized the enormous possibilities of the Northwest and the great advances which had been made. The country is capable of producing 800,000,000 bushels of grain, sufficient to meet the requirements of Great Britain three times.

Providence in endowing us with such rich natural resources did not intend Canada to be a weakling among the nations. With our natural advantages we should be yet at the highest place among the nations of the world.

Mr. Bowman closed with an eloquent peroration describing the wealth and possibilities of the far Canadian West. Moses on Mount Nebo did not see a promised land one half so fair as that which greets the eye of the traveler crossing the Rocky Mountains by the C.P.R.

#### JOHN MCAVITY.

Mr. McAvitty spoke briefly, bringing a message of goodwill to the association from the Maritime hardware men.

#### JAMES HARDY.

Secretary James Hardy spoke briefly on the general work of the association.

#### THE PRESS.

The toast of "The Press" was responded to briefly by Col. J. B. Mac-

Lean for Hardware and Metal. He was delighted to learn of the progress of the association and he hoped it would be decided to extend its area. Hardware and Metal had always been in favor of such associations among the trade. The speaker emphasized the importance of encouraging tourist trade in Canada and showed that the hardware trade would profit from it.

Mr. White, of the Montreal Gazette, also spoke briefly in response to this toast.

#### VOTE OF THANKS.

A vote of thanks to President Lewis moved by S. Ewing and seconded by Dr. Cameron, was carried amid enthusiasm and the meeting dispersed to the strains of "God Save the King."

#### MR. A. T. WELDON.

THIS paper has pleasure in presenting to its readers in this week's issue a portrait of Mr. A. T. Weldon, recently appointed to the position of secretary of the Halifax Board of Trade.

Mr. Weldon has spent practically his whole life in the Maritime Provinces,



Mr. A. T. Weldon, Secretary Halifax Board of Trade.

and his business training has been along such lines as fit him peculiarly for the important post he has been appointed to fill. He was born at Dorchester, N. B., on March 6, 1876. Entering the employ of the Intercolonial Railway at the age of 14, he continued to serve this organization up to the time of his resignation to accept the secretaryship of the Halifax Board of Trade. All the way through Mr. Weldon's experience has been principally along the line of transportation.



# MARKETS AND MARKET NOTES

## QUEBEC MARKETS.

Office of HARDWARE AND METAL,  
232 McGill Street.

Montreal, Sept. 7, 1904

### Hardware.

**F**ROM the present until November, when the freight rates are changed, the hardware business promises to be an exceedingly active one. This is usually one of the busiest seasons of the year and all indications, as noted from the volume of passing trade, go to show that the aggregate amount will not be behind the best year which the trade has yet seen. The Northwest trade has opened up well, and so far has been unusually good. Every month sees the west becoming a more important market for the hardware trade in general. Nails and builders' hardware being in particular demand. The trade in Quebec continues to increase at a larger rate.

A single change in price is noted, which is a reduction in fence wire staples. Canadian makers are short in a few sizes of loaded shells, but are fast catching up with the shortage. Other lines are well stocked throughout.

**Food Choppers**—The volume of trade in this line, which was already brisk, has increased materially within the last week. We quote, smallest size \$1.05 each net; medium family size \$1.20 each net; large family size \$1.35 each net.

**Corn Cutters and Huskers**—A lively trade is being done in corn cutters and huskers. Our quotations are as follows: Corn cutters, \$1.75 to \$3 a dozen net; corn huskers, from 75c to \$1.85 a dozen net; corn huskers glove, \$5 a dozen net.

**Agricultural Wrenches**—Hardly as many orders received during the last week as formerly. We quote: 5 in., \$2.85 a dozen; 8 in., \$3.15; 10 in., \$3.75; 12 in., \$4.40, and 15 in., \$7.50 a dozen.

**Grindstones**—The demand continues fairly good, although somewhat less than a few weeks previous. Our quotations are as follows: 40 to 200 lbs., 2 in., and over thick, \$1.10 to \$1.20; 20 to 40 lbs., 2 in., thick and over, \$1.20; 11-2 in., thick and under 2 in., \$1.30.

**Skates**—Skates have not as yet been ordered in any large numbers, so that the real trade can hardly be said to have commenced. We quote the following prices: Halifax pattern, plain, 38c a pair; nickeled, 60c a pair; Ladies nickel plated, plain 58c a pair; good quality, \$1.25 a pair; good quality concave, \$1.50 nickel plated, 65c a pair; high grade, plain, 90c a pair; high grade nickel plated, \$1.25 a pair; high grade nickel plated with puck stop \$1.30 a pair; high grade nickel plated, concave \$1.60 a pair.

**Lanterns**—An active business continues to be done. We quote: Cold Blasts, \$7 a dozen; No. 0 Safety, \$1 a dozen.

**Sleigh Bells**—These are moving well and the Winter's trade is now under way. The season promises to be a good one. Our quotations are: Brass team bells, rough \$1.80 to \$4.50 a dozen; polished, \$2.10 to \$5.00 a dozen; nickeled \$2.25 to \$5.15 a dozen; brass grelots, 38c to \$2.25 a dozen; York eye bells, pear shaped \$1.35 to \$1.75 a dozen; shaft gongs, 21c to \$2.40 a pair; saddle gongs, \$1.10 to \$3.00 each.

**Washing Machines**—There is a dullness in the trade of this line, few orders being placed. We quote as follows: Round (three legs) \$35 per dozen; round (four legs), \$39 per dozen; square (regular size), \$42 per dozen; square (smaller size), \$36 per dozen; round rotary, \$56 per dozen; square rotary, \$59 per dozen; "New Century," \$72 per dozen.

**Wringers**—The market can hardly be said to be active. We quote as before, discounts 33 1/3 per cent.

**Currycombs**—There is a lively trade being done. The price remains unchanged. We quote as before, discount 37 1/2 per cent.

**Heavy Screw Hooks and Hinges**—An ordinary amount of business continues. We quote: Sizes 12 inches and upwards are selling at \$3.25 per 100 lbs.; the price of the 6, 8 and 10 inch sizes is \$4.25.

**Wire Coat and Hat Hooks**—In somewhat better demand than a week ago, but by no means brisk. Price 75 cents a gross for three inch.

**Annealed Wire**—Canadian annealed wire is at present being used for binding pressed hay, as that the market is brisk. We quote at the recently lowered price, which still holds, namely \$2.25 per hundred lbs.

**Fence Staples**—A change in price is noted this week in fence staples. The price for both galvanized and bright is lower. We quote \$2.65 per hundred lb. keg for bright, and \$2.85 for galvanized, 25 to 50 lb. packages, 20c extra.

**Barb Wire**—Many orders have been received during the past week for barb wire, for Fall shipment. We quote the following: \$2.25 per 100 lb. f. o. b. Montreal, and \$2.50 f. o. b. Cleveland. Car lots of 15 tons, \$2.40 f. o. b. Cleveland.

**Galvanized Wire**—Little business is being done at present. The latest range of prices still holds. The new prices are: In carlots f. o. b. Montreal, Nos. 6, 7 and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 15, \$3.50. In carlots f. o. b. Cleveland, Nos. 6, 7, 8 and 9, \$2.02 1/2; No. 10, \$2.07 1/2; No. 11, \$2.12 1/2; No. 12, \$2.17 1/2; No. 13, \$2.27 1/2; No. 14, \$2.37 1/2.

**Rivets and Burrs**—The demand is moderate and has continued so for some time past. Discourts are: Best iron rivets, section carriage and wagon iron, black rivets, turned do., carpenter's rivets and turned swede rivets, 60 and 10 per cent.; swedes iron burrs are quoted at 55 per cent. off; copper rivets with the usual proportion of burrs, 45 per cent. off, and coppered iron rivets and burrs, in 5 lb. carton boxes are quoted at 60 and 10 per cent. off list.

**Screws**—Screws continue in active demand, every day seeing sorting on orders being shipped. Discounts are: Round head, bright, \$2 1/2 per cent.; flat head, bright, \$7 1/2 per cent.; round head, 75 per cent.; round flat head, 80 per cent.

**Bolts and Nuts**—There is no fresh demand. Slotted bolts have been particularly active. Prices and discounts remain the same. Our quotations are: Carriage bolts, square (5 1/2 in.), 3.16 to 3.8 diameters, 60 and 10 per cent.; carriage bolts, square (5 1/2



list), 7-16 diameter and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 diameter and under, 60 per cent.; machine bolts, 7-16 diameter and larger, 55 and 5 per cent.; plow bolts, 55 and 5 per cent.; blank bolts, 55 and 5 per cent.; bolt ends, 55 and 5 per cent.; sleigh shoe bolts, 70 and 5 per cent.; coach screws, cone point, 70 and 5 per cent.; nuts, square, all sizes, 4c per lb. off; nuts, hexagon, all sizes, 4 1-4c per lb. off. Washers, 45 per cent. off.

**Cut Nails**—The demand for cut nails is hardly as brisk as it was earlier in the season. We quote as before, \$2.30 per keg f.o.b. Montreal, Toronto, Hamilton, St. John.

**Wire Nails**—The situation offers little for comment more than what has been said already. There is no object in quoting prices as the selling prices are away below the manufacturers' list. As stated before wire nails are now quoted on application by the different dealers, each deal being the result of individual terms.

**Pressed Spikes**—There is a more active market in pressed spikes this week. Discount as before, 25 per cent.

**Horseshoes**—These are moving well, the demand being good from all parts of the country. Our quotations are: Iron shoes, light and medium pattern, No. 2 and larger, \$3.65; No. 1 and smaller, \$3.90; snow pattern, No. 2 and larger, \$3.90; No. 1 and smaller, \$4.15; light steel shoes, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; featherweight, all sizes, 0 to 4, \$5.35; toe weight, all sizes, 1 to 4, \$6.60. Packing—Up to three sizes in a keg, 10c per 100 lbs. More than three sizes, 25c.

**Horsenails**—Business is good. Our quotations are as follows: No. 4, 1 7-8 in., 48c; No. 5, 2 in., 32c; No. 6, 2 1-8 in., 28c; No. 7, 2 1-4 in., 24c; No. 8, 2 3-8 in., 22c; Nos. 9, 2 1-2 in., 10, 2 5-8 in., 11, 2 3-4 in., 12, 2 7-8 in., and 14, 3 1-8 in., all 20c per lb. Trade discount C brand 40, 10 and 7 1-2 off list. Other brands 55 and 57 1-2 per cent off list.

**Shot Guns and Rifles**—More orders for rifles have been received this week than formerly, while shot guns continue as before, to be in good demand. Prices remain the same, which are to be had on application.

**Ammunition**—The Fall season has commenced with a good swing and many

orders are being received. There is a shortage on some sizes of Canadian loaded shells, but this is being caught up with as fast as possible.

**Shot**—The opening up of the hunting season has seen a big demand for standard shot. We quote: Standard, \$6.50 per hundred lbs.; chilled, \$7 per hundred lbs.; buck and seal, \$7.50 per hundred lbs.; ball, \$8 per hundred lbs. We quote discounts 17 per cent. f.o.b. Montreal, Toronto, Hamilton, London, St. John and Halifax.

**Roofing Pitch**—The demand for roofing pitch shows no sign of falling off. The price remains as before \$1 per hundredweight.

**Building Paper**—The trade reports an active business being done in building paper of all kinds. Prices remain the same. We quote: Tarred felt, \$1.55 per 100 lbs.; 2-ply ready roofing, 90c per roll; 3-ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O.K. and I.X.L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 65c per roll.

**Cement**—The cement business, which has been unusually dull all Summer, has commenced with a brighter tone and indications go towards considerable business being done. The following are our quotations: English, \$2 to \$2.10; Belgium, \$1.70 to \$2.10 per barrel, ex store; and American \$2.15 to \$2.35, ex cars.

**Cordage**—While some lines of cordage continue in good demand business on the whole can hardly be called active. The dull season for cordage is expected to commence within a short time. No change in price this week. We quote: British pure manila, 11c; pure manila, 14 1-2c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; Russian tarred spun yarn, 13c; jute rope, 3-8 in. in diameter and upward, 9c; cotton rope, 21c; cotton twine, 24c for 3 and 4 ply; cotton bed cord 90c to \$1.70, according to length; sash cord, 30 to 31 1-2c; cotton candle wick, 22 to 24c.

#### METALS.

Although still in a somewhat subdued state the metal market continues to improve slightly. Two of the largest consignments of Canadian pig within the past two years were recently sent to Glasgow. Little stock has been moving throughout the Summer and little supplies have been kept on hand, so that

dealers are now stocking up although in small quantities. Pig iron has not recovered to any great extent. Bar iron continues active, but some sizes are scarce. Tool steel, merchant steel and galvanized iron are all strong and active. Tin plates are stiffer while Canada plates and black sheets are slightly weaker. Canada plates continue very active, but there are few tin plates moving. Ingot copper and tin are both firm and fairly active. There is little or nothing doing in scrap metals.

**Pig Iron**—The market is still listless although slightly better than last week, not having recovered to any marked activity. Prices remain unchanged. We quote:

|                                             |                                        |
|---------------------------------------------|----------------------------------------|
| "Disc," No. 1.....                          | \$17.50 delivered Montreal             |
| "Dom.," No. 1.....                          | 18.50 " "                              |
| Usual difference in price for lower grades. |                                        |
| Ferrona No. 1.....                          | \$18.00 delivered Montreal.            |
| " No. 2.....                                | 17.50 " "                              |
| " No. 3.....                                | 16.50 " "                              |
| " No. 4.....                                | 16.00 " "                              |
| Londonderry.....                            | \$18.50 to \$19.00 delivered Montreal. |
| Summerlee.....                              | 18.50 " "                              |
| Glengarnock.....                            | 20.00 " "                              |
| Gartsherrie.....                            | 19.25 " "                              |
| Carnbroe.....                               | 18.50 " "                              |
| Carron No. 1.....                           | 19.00 " "                              |
| " (special).....                            | 17.50 " "                              |
| Ayresome No. 1.....                         | 17.50 " "                              |
| " No. 3.....                                | 16.90 " "                              |
| Clarence No. 1.....                         | 16.25 " "                              |
| " No. 3.....                                | 16.00 " "                              |

**Bar Iron**—A lively trade is being done. Some sizes are reported extremely scarce this week. There is a stronger tendency. We quote: Merchants' bar, \$1.72 1-2; horseshoe iron, \$1.97 1-2; forged iron, \$1.92 1-2; net cash 30 and 15 per cent.

**Tool Steel**—The market is strong and continues fairly active. We quote: Black Diamond, 8c to 9c; Sanderson's 8 to 45c, according to the grade; Jessop's, 13c; Jonas & Colver's, 10 to 20c; "Air Hardening," 65c per lb.; Conqueror, 7 1-4c. Conqueror High Speed steel, 60c.

**Merchant Steel**—There is no new feature this week. A strong market with a fair demand. Quotations are as follows: Sleighshoe, \$1.90; tire, \$1.95 to \$2.10; spring, \$2.75 to \$2.95; toe calk, \$2.35; machinery (iron finish), \$2; square harrow, \$2.45; reeled machinery steel, \$2.75.

**Canada Plates**—Canada plates show an active market with a slightly weaker tendency. We quote: 52s, \$2.30; 60s, \$2.35; 75s, \$2.40; full polished, \$3.60; galvanized 52s, \$3.90 to \$4; 60s, \$4.15 to \$4.25.

**Black sheets**—Fall import orders are being received in large numbers. Market is still weak. We quote: 28 gauge, \$2.25; 26 gauge, \$2.20; 22 to 24 gauge,



\$2.15; 19 to 20 gauge, \$2.10; 8 to 10 gauge, \$2.30.

**Galvanized Iron**—In unusually brisk demand. The market is strong and more of this line is moving than any other at present. We make the following quotations: Queen's Head, 28 gauge, \$4.15; 26 gauge, \$3.90; 22 to 24 gauge, \$3.65; 16 to 20 \$3.55; Appolo, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24, \$3.75; 16 to 20 gauge, \$3.40. Fleur-de-Lis, 28 gauge, \$4; 26 gauge, \$3.75; 22 to 24 gauge, \$3.50; 16 to 20 gauge, \$3.40. Comet, 28 gauge, \$3.95; 26 gauge, \$3.70; 22 to 24 gauge, \$3.45; 16 to 20 gauge, \$3.40. Bell brand, 28 gauge, \$4; Gorbals "Best Best," 28 gauge, \$4.15; "Windmill Best," 28 gauge, \$4. In less than case lots, 25c extra.

**Sheet Zinc**—A strong upward tendency prevails. There is little demand just now. We quote case lots at \$6.37 1-2 to \$6.62 1-2, and small quantities at \$6.62 1-2 to \$6.87 1-2.

**Tin Plates**—The tin plate market is slack. Little stock moving. We quote: Cokes, \$3.75; charcoal, \$4.

**Ingot Tin**—Although quotations remain the same there is every indication that higher prices will prevail shortly. The market continues active. Quotations are 30 to 30 1-2c.

**Ingot Copper**—The market is very firm and active with a decidedly upward tendency. No change in price this week. The supply is still somewhat limited. We quote: 13 1-2 to 13 3-4c. The former price being for quantities only and is firmly held at that.

**Pig Lead**—Slightly more active than formerly. Prices remain unchanged. We quote: \$3.25 to \$3.35.

**Scrap Metal**—There is no change in the conditions affecting this market this week. A feeling of increased demand is felt but only to a slight extent. We quote: Heavy copper and wire, 10 to 10 1-2; light copper, 9 to 9 1-2; heavy red brass, 9 1-4 to 9 3-4c; heavy yellow brass, 7 to 8c; light brass, 4 1-2 to 5c; lead, 2 1-4c; zinc, 2 3-4 to 3c; iron, No. 1 wrought, \$10; machinery scrap, \$12 to \$13; stove plate, \$10; mixed country rags, 65 to 75c per 100 lbs.; old rubbers, 4 1-2 to 4 3-4c.

**Coil Chain**—Market continues weak while the demand is not at all brisk. Our quotations are: No. 6, 10c; No. 5, 9c; No. 4, 8 1-2c; No. 3, 7c; 1-4 in., \$6.10; 5-16 in., \$4.70; 3-8 in., \$4; 7-16 in., \$3.80; 1-2 in., \$3.70; 9-16 in., \$3.55; 5-8 in., \$3.35; 3-4 in., \$3.30; 7-8 in., \$3.25; and 1 in., \$3.20 with 10c allowance on carlots.

## ONTARIO MARKETS.

Office of HARDWARE AND METAL.

10 FRONT STREET EAST  
TORONTO, SEPT. 9, 1904.

**CONDITIONS** on this market are much the same as last week. There has been no change in quotations, and business keeps its steady tone. Sporting goods for Fall trade have a very good demand, and wholesale houses are preparing to supply the demand for Winter sporting goods.

**Sporting Goods**—There is an active demand for all lines of Fall sporting goods. Wholesale dealers are preparing to supply the demand for Winter sporting goods, such as skates, hockey sticks, etc., but as yet retailers are not placing orders.

**Shot Guns and Rifles**—The demand for this line is quite brisk, and is on the increase.

**Ammunition**—There is a very good demand, and it will probably continue throughout the Fall. Quotations are: American rim fire cartridges, 30 and 21-2 discount from list; American centre fire, 5 per cent. advance on list.

**Harvest Tools**—Trade is over in this line for the season. There are, however, a few lines of Fall goods still selling 60 per cent. off.

**Washing Machines**—There is very fair demand for this line. We quote: Round reacting washer, per dozen, \$56; square, reacting washer, per dozen, \$59; Eclipse, \$48; Dowsell, \$36; New Century, \$72; Capital, \$42; Magic, \$35; Famous, \$42; Connor Improved, \$33; Ottawa, \$39; Daisy, \$48; Dandy, \$30.

**Woodenware**—A very fair business is being done. Quotations are unchanged as follows: Tubs, No. 0, \$11.25; No. 1, \$9.00; No. 2, \$8.00; No. 3, \$7.00; pails No. 1, 2 hoops, \$1.85; 3 hoops, \$2.00; clothes pins, 5 gross cases (full count), 60c; 4 dozen packages (12 to case), 75c; 6 dozen packages (12 to case), 95c.

**Steel Track Door Hangers**—There is little change in the situation. Business is very fair for this season.

**Chain**—The demand is fair. Prices are quoted as follows: 1-4 inch, \$6.50; 5-16 inch, \$4.45; 3-8 inch, \$3.85; 7-16 inch, \$3.70; 1-2 inch, \$3.55; 9-16 inch, \$3.45; 5-8 inch, \$3.35; 3-4 inch, \$3.25.

**Step Ladders**—We quote at 10c per foot for 3 to 6 feet, and 11c per foot for 7 to 10 feet ladders.

**Barb Wire**—The reduction in this line of 25 cents per 100 lbs., noted last

week, holds. Trade is rather quiet. Changed quotations are as follows: \$2.50 per 100 lbs f.o.b. Toronto and \$2.25 f.o.b. Cleveland. Carlots of 15 tons, \$2.15 f.o.b. Cleveland.

**Galvanized Wire**—There is a fair amount of business being done. Quotations are: No. 5, \$3.45; Nos. 6, 7 and 8, \$2.90; No. 9, \$2.25; No. 10, \$2.95; No. 11, \$3; No. 12, \$2.40; No. 13, \$2.50; No. 14, \$1. Nos. 9, 12 and 13 are on the free list, and thus the lowness in price is accounted for.

**Coiled Spring Wire**—Trade is very quiet. Manufacturers have confirmed existing prices, and so there will be no change. Our quotations are as follows: No. 9, \$2.70 per 100 lbs., freights equalized with factory points at Montreal, Hamilton, London, Welland or Walkerville and allowance to other points up to 25c; carlots, \$2.65; freight allowance to 20c.

**Wire Nails**—The situation on this market is unchanged. Cutting in prices still continues, and prices range according to the agreement made between retailer and wholesaler. Nominally prices remain unchanged at \$2.45 per keg f.o.b. Toronto, with car loads at \$2.40.

**Cut Nails**—A moderate trade doing, with prices steady at \$2.30 per keg f. o.b. Toronto and Hamilton.

**Horseshoes**—There is a fair amount of business being done. Prices are as follows: Iron shoes, light and medium pattern, No. 2 and larger, \$3.80; No. 1 and smaller, \$4.05; snow No. 2 and larger, \$4.05; No. 1 and smaller, \$4.30; light steel shoes, No. 2 and larger, \$3.95; No. 1 and smaller, \$4.20; featherweight, all sizes, 0 to 4, \$5.50; toe weight, all sizes, 1 to 4, \$6.75. If shipped from factory 15c less.

**Horsenails**—Business is fairly good in this line. Prices remain unchanged. Quotations are: "C" brands, 40 10 and 7 1-2 per cent.; other brands 55 and 57 1-2 per cent.

**Screws**—A very steady demand keeps up. Prices are unchanged. We quote: Flat head bright, 87 1-2 per cent. discount; round head bright, 82 1-2 per cent.; flat head brass, 80 per cent.; round head brass, 75 per cent.; round head bronze, 70 per cent.; flat head bronze, 75 per cent.

**Rivets and Burrs**—A steady and brisk demand continues. Prices remain unchanged. We quote: Iron rivets, 60 and 10 per cent. discounts; iron burrs, 55 per cent.; copper rivets, with usual proportion of burrs, 45 per cent.



**Bolts and Nuts**—There is a very fair trade being done. Prices are unchanged. We quote as follows: Carriage bolts, common (\$1 list), 3-8 diameter and smaller, 60 and 10 per cent.; 7-16 and up, 55 and 5 per cent.; carriage bolts, full square (\$2.40 list), 60 per cent.; carriage bolts, Norway iron (\$3 list), 60 per cent.; machine bolts, 3-8 and less, 60 per cent.; 7-16 and up, 55 and 5 per cent.; coach screws, cone points, 70 and 5 per cent.; plow and blank bolts and bolt ends, 55 and 5 per cent.; sleigh-shoe bolts, 70 per cent.; nuts, hex., all sizes, 4 1-4c per lb.; square, 4c per lb.

**Cordage**—There is no change in quotations on this market. There is a fair amount of trade being done. We quote: Pure manila, 14 1-2c; British pure manila, 11c; sisal, 10 1-2c; double lath yarn, 10 1-2c; single lath yarn, 10c; double shingle yarn, 10 1-2c; single shingle yarn, 10c; sashcord, "Hereules," 30 to 32c; "Star," 36 to 38c; cotton rope, 3-16 inch and up, 20 1-2 to 22c; 5-32 inch, 25 to 27c; 1-8 inch, 25 to 28c; cotton twine, 3 ply, 24c; 4 ply, 29c; calking cotton, 16 1-2 to 17c; cotton waste, colored, 6 3-4c; white, 11 to 13c.

**Building Paper**—The demand for this article has picked up during the week, everything points to a good Fall trade. Prices remain the same and are likely to do so until the end of the year. We quote: Tarred felt, \$1.85 per 100 lbs.; 2 ply ready roofing, 90c per roll; 3 ply, \$1.15 per roll; carpet felt, \$2.25 per 100 lb.; dry sheathing, 40c per roll; tar sheathing, 50c per roll; dry fibre, 55c per roll; tarred fibre, 65c per roll; O. K. and I. X. L., 70c per roll; heavy straw and sheathing, \$35 per ton; slaters' felt, 60c per roll.

**Firebrick**—The demand for firebrick continues fairly good. Prices are unchanged. We quote the following prices: English and Scotch firebrick, 30 to 35c; American, low grade, 22 to 27c; high grade 32 1-2 to 40c.

**Cement**—During the past week some American shipments of cement have arrived upon the local market, and if this continues it will have a tendency to lower the price of American and Canadian Portland. The local demand is quiet. Quotations are as follows: Canadian Portland, \$1.70 to \$2; English, \$2.15 to \$2.25; Belgian, \$1.90 to \$2; ex-store; American Portland, \$1.80 to \$2.10 f.o.b. Toronto.

## METALS.

There is a very noticeable improvement in the tone of this market this week. The market is, however, rather unsettled in unison with the markets in the States. This state of affairs is the result of the conferences being held in New York and Pittsburg, the result of which conferences are being awaited on the market. Although there is a better feeling on the market, buyers are still showing a little hesitancy because of the unsettled condition and orders are for the most part of the "hand to mouth" variety.

**Pig Iron**—Conditions on this market are improved. There is more buying being done this week than for some weeks past. However, buyers are still hesitating about placing large orders on account of the unsettled condition of the market. This unsettled condition is the result of the conferences being held in New York and Pittsburg.

|                                   |                  |
|-----------------------------------|------------------|
| Middleboro, f.o.b., Toronto.....  | \$18 70          |
| Hamilton, No. 1.....              | \$17 50 to 18 00 |
| " No. 2.....                      | 17 00 to 17 20   |
| " No. 1, Hamilton.....            | 16 25 to 16 55   |
| Midland, No. 1.....               | 17 00 to 18 00   |
| " No. 2.....                      | 17 00 to 17 25   |
| " No. 1 f.o.b. Midland.....       | 16 25 to 16 75   |
| Radnor, f.o.b. furnaces.....      | 27 50            |
| Londonderry, f.o.b. furnaces..... | 16 50 to 17 00   |

**Bar Iron**—A good business is being done and prices are firmly maintained. We quote \$1.75 f. o. b. Toronto, with discount of 2 per cent. For extras as cut to length while rolling, 2 feet and over, 10c per 100 lb.; 1 foot and under 2 feet, 15c; under 1 foot, 20c; over 20 feet, by special agreement according to length and size.

**Steel**—A very good demand is reported, and prices are steady. Quotations as follows: Morton's "Self Hardening," 60c; "Alpha," 70c; Morton's tool steel, 14c; Jessop's high speed, 60c; Jessop's "Standard" tool, 14c; "Chas. Leonard," 8 to 9c; Jessop's best crucible sheet steel, 14c; Crucible Steel Co.'s "Black Diamond," 10c to 11c; "Silver," 13c; "Special," 17c; "Rex" high speed, 65 to 75c; "Self Hardening," 45 to 50c.

**Tin**—The market is improving, and is quite strong. Prices remain unchanged. Quotations are from 30c to 31c.

**Galvanized Sheets**—This market has improved, and there is an active demand this week. We quote as follows: Queen's Head, \$4.25 for 28 gauge; American, \$3.75 for 28 gauge; Bell brand, \$4.25 for 28 gauge; Gordon Crown, \$4.25 for 28 gauge.

**Tin Plates**—There is a very good demand, with prices unchanged. Stocks are light. We quote the following:

Coke plates, bright, 14x20, \$3.40 to \$3.50; charcoal plates, \$4.

**Canada Plates**—There is a very good demand. Prices remain unchanged. We quote: All dull, \$2.50; half-polished, \$2.60; and all-bright, \$3.50.

**Copper**—Both ingot copper and sheets are active. Prices are steady, with quotations in ton lots as follows: Ingot copper, \$13.25 to \$13.50, and sheet copper, \$20 per 100 lbs.

**Brass**—This market is more active this week. Discounts are steady at 15 per cent.

**Lead**—Business has been very brisk, and a large amount has been done during the week. We quote: \$3.25 to \$3.35 per 100 lbs. for pig lead and \$3.60 for bar lead.

**Zinc Spelter**—There has been a falling off in demand during the week. Prices are from 5 3-4c to 6c per lb.

**Solder**—This market has picked up and is active. We quote: Guaranteed half-and-half at 17 1-2 to 18c, and wiping 16 1-2 to 17c.

**Antimony**—The market exhibits activity this week. Quotations are: 7 1-2 to 8c per lb.

**Old Material**—This market continues the same. As a result of difference of opinion amongst the dealers a wider range of prices is given on No. 1 wrought, stoveplate and machinery cast scrap. Some dealers claim that the market will brighten up after the United States elections, but a dull market is expected by all up till then. There is a sharp demand for old rubbers with a tendency for an advance in price in a short time. Our quotations are as follows: Heavy copper and wire 10 1-4c per lb.; light copper, 9 1-2c per lb.; heavy red brass 9 1-4c per lb.; heavy yellow brass, 7 to 7 1-2c lb.; light brass, 5 to 5 1-2c per lb.; lead, \$2.20 to \$2.40 per cwt.; scrap zinc, 3 1-4c per lb.; iron, No. 1 wrought, \$7 to \$9; No. 2 wrought, \$2; machinery cast scrap \$10 to \$12; stoveplate \$7 to \$9; malleable and steel, \$4; old rubbers, \$4 1-2c per lb.; country mixed rags, 60c per 100 lbs.

**Petroleum**—The demand still continues steady on this market. Our quotations on prices are as follows: Canadian water white, 18c; Canadian prime white, 16 1-2c; American water white, 18 1-2c, ex-warehouse.

## Hides, Tallow, Skins and Wool.

The market in hides, tallow, skins and wool remains practically unchanged. The season for sheep skins is over, lamb skins having taken their place. Lamb



## PORTLAND CEMENT

CANADIAN, ENGLISH,  
GERMAN and BELGIAN.  
FIRE BRICKS, FIRE CLAY,  
ENAMELLED BRICKS, all colors.  
BUILDING BRICKS.

SEWER PIPES, CULVERT PIPES,  
WHEELBARROWS,  
FOUNDERS' and CON-  
TRACTORS' SUPPLIES.

### F. HYDE & CO.

WELLINGTON ST., MONTREAL

## Deseronto Iron Co.

LIMITED

DESERONTO, ONT.

Manufacturers of

## CHARCOAL PIG IRON

BRAND "DESERONTO."

Especially adapted for Car Wheels, Malleable Castings, Boiler Tubes, Engine Cylinders, Hydraulic and other Machinery where great strength is required; Strong, High Silicon Iron, for Foundry Purposes.

## "MIDLAND"

BRAND

## Foundry Pig Iron.

Made from carefully selected Lake Superior Ores, with Connellsville Coke as Fuel, "Midland" will rival in quality and grading the very best of the imported brands.

Write for Price to Sales Agents

Drummond McCall & Co.

MONTREAL, QUE.

or to

Canada Iron Furnace Co.

MIDLAND, ONT.

Limited

We invite inquiries for

## Steel Rails

BAR IRON, PIG IRON GALVANIZED IRON,  
CANADA PLATES, TINPLATES, WIRE ROPE  
(W. B. BROWN & CO.), CEMENT, FIRE BRICKS  
ORE BAGS, GRAIN BAGS, ETC.

C. F. JACKSON & CO., Limited

Importers and Commission Merchants

151 Hastings St. W., VANCOUVER, B.C.,  
and LIVERPOOL, ENGLAND.

skins and shearling are advancing, otherwise the price list remains the same. Supply and demand is improving. Our quotations are as follows:

### HIDES

|                             |      |
|-----------------------------|------|
| No. 1 green steers, per lb. | 0 09 |
| No. 2 green, per lb.        | 0 08 |
| No. 1 green, per lb.        | 0 08 |
| No. 2 green, per lb.        | 0 07 |

### CALFSKINS.

|                                          |      |
|------------------------------------------|------|
| Veal skins, No. 1, 6 to 10 lb. inclusive | 0 10 |
| " " " 2 " 10 to 15 lb. "                 | 0 08 |
| " " " 3 " 15 to 20 lb. "                 | 0 09 |
| " " " 4 " 20 to 25 lb. "                 | 0 07 |
| Deacons (dairies), each                  | 0 05 |
| Lamb skins                               | 0 05 |
| Shearlings                               | 0 05 |

### TALLOW.

|                          |                   |
|--------------------------|-------------------|
| Rendered Tallow, per lb. | 0 04 1/2 0 04 1/2 |
|--------------------------|-------------------|

### WOOL.

|                                |               |
|--------------------------------|---------------|
| Unwashed wool, per lb.         | 0 11 1/2 0 13 |
| Fleece wool, new clip, per lb. | 0 19 0 20     |
| Pulled wools, super, per lb.   | 0 20 0 22     |
| extra                          | 0 21 0 23     |

### PITTSBURG METAL MARKET.

From the Iron Trade Review, Sept. 9, 1904

REDUCTIONS of \$4 a ton on structural shapes and plates over 24 inches wide, and of \$6 a ton on plates from 6 1/4 inches up to 24 inches were announced yesterday. These are the outcome of a series of conferences held in New York during the past three weeks among the representatives of the leading steel interests, the constant shading of agreed prices on not only plates and structural shapes, but billets and bars as well having brought about these meetings. Nothing has yet been done on billets and bars, but reductions are expected to follow. An agreement on the cost of fitting material, applying to structural mills operating their own structural fitting department is also being perfected, and will no doubt obviate the many charges that have been made in the past of these mills reducing the prices of steel in order to keep their fitting departments operating full. It is also announced that the Lackawanna Steel Co. is now affiliated with both associations and has agreed to maintain the new prices.

Owing to the large number of small independent steel companies operating universal and groove mills on which plates of narrow widths can be rolled, and fearing that they would immediately make concessions from the agreed prices if the reduction of \$4 had applied to all sizes, it was decided to reduce plates up to 24 inches in width \$6 a ton. With the present price of steel it will be impossible to shade this price, and even if billets are reduced \$4 a ton, the amount of shading that can be done cannot greatly affect the market. The fixing of 1.30c as the price on sizes up

## Tinned Sheets Tinplates Canada Plates Polished Sheets

ETC., ETC.

FROM STOCK OR FOR IMPORT

### A. C. LESLIE & CO.

509-512 Merchants Bank Building.

MONTREAL.

### A Good Iron Pipe like the McDougall Standard

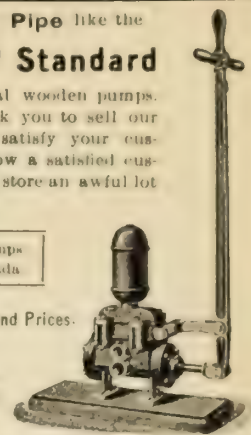
will outwear several wooden pumps. That's why we ask you to sell our STANDARD. They satisfy your customer, and you know a satisfied customer can do your store an awful lot of good.

McDougall Pumps  
Made in Canada

Send for Catalogue and Prices.

The  
R. McDougall Co.  
Limited

Galt, Ont.



## "ALPHA" HIGH SPEED STEEL Crucible Cast Steel for Tools of all kinds.

### "B.C." Miners' Drill Steel

### B. K. MORTON & CO.

SHEFFIELD, ENG.

Agents for Ontario

BAINES & PECKOVER, Toronto

Agents for British Columbia:

E. G. PRIOR & CO., Limited, Victoria.

Canadian Rep.

D. W. CLARK, P.O. Box 520, Toronto

## NOVA SCOTIA STEEL & COAL Co., Limited

NEW GLASGOW, N.S.

Manufacturers of

## Ferrona Pig Iron

And SIEMENS MARTIN

### OPEN HEARTH STEEL



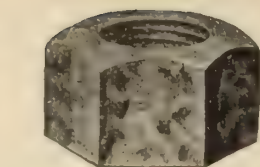
in 24 inches practically establishes an official price on grooved skelp. With the rate market on this basis it will be impossible to continue the steel bar market on its present basis of 1.35c, and a reduction of \$2 a ton is looked for.

Another reduction on merchant pipe has also been announced ranging from one to three points, the reduction going into effect on September 3. Boiler tubing remains unchanged, however. Within the past six weeks reductions have been made on tin plates, sheets, wire products, merchant pipe, plates and structural shapes, and with the reduction in billets and steel bars the present readjustment of the market will have been completed. It is generally believed that buying will follow these reductions and that the market will be stimulated, though no great change is looked for until next year. The spread between pig iron and nearly all of the finished products is now at about the proper point.

**Pig Iron**—The iron market continues quiet, and is somewhat weaker. Buying is limited to small lots almost entirely, the inquiry of the Westinghouse Electric and Mfg. Co. for 4,000 tons of foundry iron, for delivery to its Allegheny and Cleveland plants up to next April, being the largest that has been in the market for some time. On Bessemer iron it is possible to do as low as \$11.75, although none of the furnaces in the Bessemer pig iron associations will do better than \$11.90. On Northern foundry \$11.75 to \$12 at the furnaces is the spread, while forge continues to be held on the basis of \$11.85 to \$12, Pittsburg. Southern iron can be had on the basis of \$9.25, Birmingham for No. 2 foundry, but it is doubtful whether this can be shaded owing to the large number of furnaces out due to the coal strike. We revise quotations as follows:

|                         |                    |
|-------------------------|--------------------|
| Bessemer Valley         | \$11.75 to \$11.90 |
| Bessemer Pig Iron       | 12.60 to 12.75     |
| No. 1 Foundry           | 13.00 to 13.25     |
| No. 2 Foundry           | 12.60 to 12.85     |
| Gray Forge, Pittsburg   | 11.85 to 12.00     |
| Chilled Case, Valley    | 11.65 to 11.75     |
| Chilled Case, Pittsburg | 12.50 to 12.60     |

**Steel**—No reductions have yet been made in billets or sheet bars, although lower prices must be named owing to the reductions already announced in finished materials. Agreed prices are as follows: Bessemer and open-hearth billets, 4x4 inches, and slabs up to and including 0.25 carbon, \$23 Pittsburg, Wheeling, Valley, Johnstown, Ashland, Ky., Irontown, O., and Lorain, O.; 0.26



## THE JOHN MORROW MACHINE SCREW COMPANY, Limited

Manufacturers of

Set and Cap Screws, Special Milled Work, Engine Studs  
Etc. Cold Punched Nuts of every variety of finish.

INGERSOLL, ONT.

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To Owner  
Out Book 37  
Page 10

## Swedish Sure Grip Climber.

Forged from electro BO-RAS-IC steel, with improved spur.

Send for the Green Book of Hardware Specialties.

SMITH & HEMENWAY CO.

Mfrs. of Cutlery and Hardware Specialties.

296 BROADWAY, NEW YORK CITY.

Canadian Sample Room - 215 Christine Bldg., MONTREAL.

UTICA DROP FORGE & TOOL CO.

Mfrs. of Nippers and Pliers.

ALLEN C. JENKING, Canadian Manager

## "COMET" Brand Galvanized Sheets

are made of British Steel. The quality is the very best, but the price is low. When you get the right goods, you don't mind that.

W. GILBERTSON & CO., Limited, Makers, Pontardawe, Wales.  
ALEXANDER GIBB, Agent, MONTREAL.

# STANLEY RULE & LEVEL CO.,

NEW BRITAIN, CONN., U.S.A.

IMPROVED CARPENTERS'  
TOOLS

SOLD BY ALL HARDWARE  
DEALERS.

## Montreal Steel Works, Limited

AGENTS FOR

THOS. FIRTH & SONS., LTD.  
SHEFFIELD, ENG.

Tool Steel    Axe Steel    Double Shear Steel    Blister Steel  
Firth's Speedicut High Speed Steel    Pivot Valve Steel    Files, Etc.

Canal Bank, Point St. Charles, MONTREAL

and 0.61 to 1.00 carbon, \$2 advance, and including 0.60 carbon 1 advance; Billets smaller than 3-7-8 inches and sheets and tin bars are \$1 per ton extra. Bessemer and open-hearth rods are quoted at \$25.50 to \$27.

**Bars**—Demand for both iron and steel bars continues light, and there will be no improvement in the steel bar situa-

tion until definite action is taken with regard to prices. We quote as follows: Bar iron, 1.25c to 1.30c Pittsburg for local delivery, while for Western shipments quotations are based on 1.25c to 1.35c Pittsburg. Hoops are held at 1.55c base, and bands at 1.35c taking bar extras. Bessemer steel bars, 1.35c; open-hearth, 1.40c; plow beams and



cultivator beams, 1.35c net; channels, angles, zees and tees, Bessemer, under 3 inches, 1.45c. The following differentials are maintained on steel: Less than 2,000 pounds of a size, not less than 1,000 pounds, 10 cents advance; less than 1,000 pounds of a size, 30 cents advance.

**Plates**—A reduction on plates 24 inches and over of \$4 a ton, and \$6 on plates from 6-14 inches up to 24 inches was announced yesterday. While corporation interests favored a reduction of \$5 a ton, the leading outside mills forced a more conservative reduction as announced. Considerable buying on the part of the lake shipbuilding interests is expected to follow this reduction, a considerable tonnage having been held back owing to the high prices which have been prevailing. The \$6 reduction on the narrower sizes was made to prevent concessions on the part of small independent mills not affiliated with the association, and who in the past have greatly disturbed the market. We revise quotations as follows: Tank plate, 1-4 inch thick, 6-14 to 24 inches, 1.30c f.o.b. mill, Pittsburg; 24 inches up to 100 inches, 1.40c; flange and boiler steel, 1.50c; marine, A. B. M. A., and ordinary fire box, 1.60c; still bottom, 1.70c; locomotive fire box, not less than 1.90c and up to 2.80c; plates over 100 inches and up to 110 inches in width, not less than 5c per 100 lb. extra; plates over 110 inches to 115 inches wide not less than 10c extra; plates over 120 inches to 125 inches wide, not less than 25c extra; plates over 125 inches to 130 inches, not less than 50c extra; plates over 130 inches wide, not less than \$1 extra; plates 3-16 inch thick, \$2 extra; gauges 7 and 8, \$3 extra; No. 9, \$5 extra. Five cents extra for less than carloads. Terms net cash in 30 days, and for all points of delivery in the United States except the Pacific Coast.

**Sheets**—Demand for sheets is improving slightly, but there are constant reports of 2c on desirable specifications. We quote: No. 8, 1.60c; No. 9, 1.56c; Nos. 12 to 14, 1.70c; Nos. 15-17, 1.75c to 1.80c; Nos. 18-21, 1.85c to 1.90c

Nos. 22-24, 1.95c; Nos. 25-26, 2c; No. 27, 2.05c; No. 28, 2.10c to 2.15c; No. 29, 2.35c to 2.40c; No. 30, 2.50c to 2.55c. Galvanized: Nos. 12-17, 2.20c to 2.25c; Nos. 18-21, 2.35c to 2.40c; Nos. 22-24, 2.50c to 2.55c; Nos. 25-26, 2.65c to 2.70c; No. 27, 2.90c; No. 28, 3.10c; No. 29, 3.45c to 3.50c; No. 30, 3.85c to 3.90c.

**Wire and Wire Nails**—Next week the idle wire and nail mills of the American Steel and Wire Co., at South Sharon, will resume operations in full. Practically all of the accumulated stocks of this company have already been moved and owing to reduced prices, a much heavier buying movement than would otherwise have been possible is looked for during this month and October. We quote as follows: Wire nails, jobbers' carload lots, \$1.60; retailers' carloads, \$1.65, and less than carloads, \$1.75; painted barb wire, \$1.75 to jobbers in carloads; retailers' carloads, \$1.80, and less than carloads, \$1.90, with 30 cents for galvanizing. Annealed smooth fence wire is held at \$1.45, with the usual differentials to retailers for carloads and less than carloads. Quotations are all f.o.b. Pittsburg, 60 days, with 2 per cent. discount for cash in ten days. Iron and steel cut nails are held at \$1.65 to \$1.70.

**Merchant Steel**—Demand continued to improve, but as yet quotations are unchanged. We make the following quotations: Toe calk, 1.90c; carriage spring steel, \$1.75c; tire steel, 1.55c to 1.60c; plow steel, 6 inches and under, 1.35c for Bessemer and open hearth; plow slabs, 1-4 inch and heavier, 1.60c. Drawn and cold rolled shafting is held at 52 per cent. off in carload lots and 47 off in less than carload lots.

**Old Material**—Demand for heavy melting stock is improving, but mills and dealers having large tonnages on their hands refuse to sell below \$12.25 to \$12.50, and a few are holding out for \$13. With the resumption of idle plants an increased tonnage of melting stock is required and the increased demand is already being felt. We revise quotations, gross tons, as follows: Heavy melting stock, \$12.25 to \$12.50; re-rolling rails, \$12 to \$12.50; re-melting rails, \$11.50 to \$12; low phosphorus melting stock, \$15 to \$15.50; sheet scrap \$9 to \$9.50; No. 1 wrought, \$12 to \$12.50; cast iron borings, \$6 to \$6.50; No. 1 cast, \$10 to \$10.50.

**Coke**—The resumption of fifteen idle stacks of the Steel Corporation in the



**Corrugated Iron**

*For Sidings, Roofings, Ceilings, Etc.*

Absolutely free from defects—made from very finest sheets.  
Each sheet is accurately squared, and the corrugations pressed one at a time—not rolled—giving an exact fit without waste.  
Any desired size or gauge—galvanized or painted—straight or curved.  
Send us your specifications.

**The Metallic Roofing Co.**  
WHOLESALE MANAGERS, LIMITED  
TORONTO, CANADA.

past two weeks has resulted in a great increase in the active capacity of the H. C. Frick Coke Co. in the Connellsville region. This company now has about 80 per cent. of its ovens in operation, as compared with only 40 per cent. about two months ago. The demand for foundry coke is not increasing, however, while few new contracts are being made for furnace coke by independent interests. Strictly Connellsville furnace coke is again being offered on the basis of \$1.35 to \$1.40, and a few independent operators are again blowing out their ovens, rather than meet these prices. On foundry coke \$1.85 to \$2 represent the market. During the week ending August 27, the production of the upper Connellsville region amounted to 163,698 tons and that of the lower region 55,770. The production of the week ending September 4, will show an increase over the previous week of about 25,000 tons.

#### FIRE IN TANNERY.

Fire in the Huntsville and Bracebridge Tanning Co.'s tannery in Huntsville, recently destroyed the large leach house with all the vats. The large dynamo house was saved, although the building was badly wrecked. The property was insured in five or six different companies. The loss is heavy. Rebuilding will commence at once.

#### SITUATIONS WANTED.

**H**ARDWARE SALESMAN (23) wants situation in city; British and colonial references. G. W. Harper, Commercial Hotel, Jarvis street, Toronto. (38)

**Y**OUNG MAN wants to learn hardware; references as to character and ability. Apply Box 173, HARDWARE AND METAL, Toronto. (39)



## HARDWARE CONDITIONS IN MANITOBA.

Office of HARDWARE AND METAL.  
Room 308 McIntyre Block,  
Winnipeg, Sept. 6, 1904.

Hardware conditions are plentiful, with  
the market in proper proportion. All  
materials are in good supply and the  
prices are generally low.

|                        |             |
|------------------------|-------------|
| Isolated wire, 100 lb. | \$3 15      |
| Plain galvanized       | 6 to 8 3 39 |
|                        | 9 2 50      |
| Plain galvanized       | 10 3 50     |
|                        | 12 3 10     |
|                        | 13 3 20     |
|                        | 14 3 90     |
|                        | 15 4 45     |
|                        | 16 4 60     |
| Plain twist            | 3 15        |
| Staples                | 3 65        |
| Oiled annealed wire    | 10 3 42     |
|                        | 11 3 48     |
|                        | 12 3 56     |
|                        | 13 3 66     |
|                        | 14 3 76     |
|                        | 15 3 91     |

Annealed wires (uncoiled) 100. less.

|                                  |        |
|----------------------------------|--------|
| Horseshoes, iron, No. 0 to No. 1 | \$4 75 |
| No. 2 and larger                 | 4 45   |
| Snow shoes, No. 0 to No. 1       | 4 60   |
| No. 2 and larger                 | 4 45   |
| Steel, No. 0 to No. 1            | 4 45   |
| No. 2 and larger                 | 4 20   |

|                                         |      |
|-----------------------------------------|------|
| Horsenails, No. 4-1 1/2 in., list price | 0 48 |
| " " " " "                               | 0 32 |
| " " " " "                               | 0 28 |
| " " " " "                               | 0 24 |
| " " " " "                               | 0 22 |
| " " " " "                               | 0 20 |
| " " " " "                               | 0 20 |
| " " " " "                               | 0 20 |
| " " " " "                               | 0 20 |
| " " " " "                               | 0 20 |
| " " " " "                               | 0 20 |

Discount on these prices 40, 10, 7 1/2 per cent.,  
plus 15c. per box.

| Cut Nails—    | Wire Nails— |
|---------------|-------------|
| 2d 1 in.      | 1 in.       |
| 3d 1 1/4 in.  | 1 1/4 in.   |
| 3d 1 1/2 in.  | 1 1/2 in.   |
| 4d 1 1/4 in.  | 1 1/4 in.   |
| 4d 1 1/2 in.  | 1 1/2 in.   |
| 5d 1 1/4 in.  | 1 1/4 in.   |
| 5d 1 1/2 in.  | 1 1/2 in.   |
| 6d 2 in.      | 2 in.       |
| 8d 2 1/2 in.  | 2 1/2 in.   |
| 10d 3 in.     | 3 in.       |
| 20d 4 in.     | 3 1/4 in.   |
| 30d 4 1/2 in. | 4 in.       |
| 40d 5 in.     | 4 1/2 in.   |
| 50d 5 1/2 in. | 5 in.       |
| 60d 6 in.     | 5 1/2 in.   |
|               | 6 in.       |

|                                                                 |          |
|-----------------------------------------------------------------|----------|
| Bar iron (basis)                                                | 2 50     |
| Swedish iron (basis)                                            | 4 75     |
| Sleigh shoe steel                                               | 2 85     |
| Spring steel                                                    | 3 25     |
| Machinery steel                                                 | 3 50     |
| Tool steel, Black Diamond, 100 lb.                              | 8 50     |
| Jessop                                                          | 13 00    |
| Sheet iron, black, 10 to 16 gauge, 100 lb.                      | 3 50     |
| 18 to 22 gauge                                                  | 3 75     |
| 24 gauge                                                        | 3 90     |
| 26 gauge                                                        | 4 00     |
| gauge                                                           | 4 10     |
| Galvanized Iron, Apollo, 16 gauge                               | 4 00     |
| 18 and 20 gauge                                                 | 4 00     |
| 22 and 24 gauge                                                 | 4 25     |
| 26 gauge English or 28 American                                 | 4 25     |
| 28 gauge                                                        | 4 50     |
| 30 gauge or 10 1/4 oz.                                          | 4 75     |
| Extra sheets, 36 in. wide, an advance<br>of 25 p.c. per 100 lb. |          |
| Queen's Head, 24 gauge                                          | 4 25     |
| 26 gauge                                                        | 4 50     |
| 28                                                              | 4 75     |
| Extra sheets, 36-in. wide, an advance<br>of 25 p.c. per 100 lb. |          |
| Genuine Russian, per lb.                                        | 11       |
| Imitation                                                       | 07 to 08 |
| Tinned, 24 gauge, 100 lb                                        | 8 00     |
| 26 gauge                                                        | 8 05     |

|                                            |                   |
|--------------------------------------------|-------------------|
| Tinplate, 1C charcoal, 20 x 28, box        | 9 50              |
| " IX                                       | 11 50             |
| " IXX                                      | 13 50             |
| Ingot tin                                  | 25                |
| Canada plate, 18 x 21, 18 x 24 and 20 x 28 | 3 00              |
| Canada plate, full polished                | 3 75              |
| Sheet zinc, cask lots, 100 lb              | 7 00              |
| Broken lots                                | 7 50              |
| Pig lead, 100 lb                           | 5 00              |
| Black iron pipe, 1/2 inch                  |                   |
| " 3/4                                      | 2 80              |
| " 1                                        | 3 25              |
| Black iron pipe, 1/2 inch                  | 4 20              |
| " 1                                        | 5 85              |
| " 1 1/4                                    | 8 20              |
| " 1 1/2                                    | 10 00             |
| " 2                                        | 14 00             |
| Rope, sisal, 7-16 and larger, basis        |                   |
| Manila, 7-16 and larger, basis             | 15 25             |
| Lath yarn                                  | 11 25             |
| Solder                                     | 20                |
| Axes, chopping                             | \$ 6 75 to 12 00  |
| " double bits                              | 12 00 to 18 00    |
| Bluestone                                  | 5 25              |
| Screws, flat head, iron, bright            | 85 and 10 p.c.    |
| Round                                      | 80 p.c.           |
| Flat " brass                               | 75 and 10 p.c.    |
| Round " "                                  | 70 and 10 p.c.    |
| Coach                                      | 70 p.c.           |
| Bolts, carriage, 3/4 or smaller            | 60 and 5 p.c.     |
| " 7-16 and up                              | 55 p.c.           |
| Bolts, machine, 3/4 and under              | 55 and 5 p.c.     |
| " 7-16 and over                            | 55 p.c.           |
| Bolts, tiré                                | 60 and 5 p.c.     |
| Bolt ends                                  | 55 and 5 p.c.     |
| Sleigh shoe bolts                          | 70 p.c.           |
| Machine screws                             | 70 p.c.           |
| Plough bolts                               | 55 and 5 p.c.     |
| Square nuts, case lots                     | 3d discount.      |
| " small lots                               | 2 1/2 c.          |
| Hex                                        | 3c.               |
| " smaller lots                             | 2 1/2 c.          |
| Rivets, iron                               | 50 and 10 p.c.    |
| Copper, No. 8                              | 32                |
| No. 12                                     | 36                |
| Coil chain, 3-16 inch                      | 9 1/2             |
| " 1/2 inch                                 | 7 1/2             |
| " 5-16 inch                                | 5 1/2             |
| " 3/4 inch                                 | 5 1/2             |
| " 7-16 inch                                | 4 1/2             |
| " 1/2 inch                                 | 4 1/2             |
| " 3/4 and 1/2 inch                         | 4                 |
| Spades and shovels                         | 40 and 5 p.c.     |
| Harvest tools                              | 60 p.c.           |
| Axe handles, turned, s.g. hickory, doz.    | \$3 15            |
| No. 1                                      | 1 90              |
| No. 2                                      | 1 60              |
| Octagon extra                              | 2 30              |
| No. 1                                      | 1 60              |
| Files common                               | 70 and 10 p.c.    |
| Diamond                                    | 60 p.c.           |
| Building paper:                            |                   |
| Anchor, plain                              | 65c.              |
| " tarred                                   | 70c.              |
| Pure fibre, plain                          | 67 1/2 c.         |
| " tarred                                   | 80c.              |
| Ammunition, cartridges, Dominion R.F.      | 50 p.c.           |
| Dominion, C.F., pistol                     | 30 p.c.           |
| " military                                 | 15 p.c.           |
| American R.F.                              | 30 p.c.           |
| C.F. pistol                                | 5 p.c.            |
| C.F. military                              | 10 p.c. advance.  |
| Loaded shells:                             |                   |
| Eley's soft, 12 gauge black                | 15 00             |
| chilled, 12 gauge                          | 16 00             |
| soft, 10 gauge                             | 18 00             |
| chilled, 10 gauge                          | 19 00             |
| Shot, Ordinary, per 100 lb                 | 6 00              |
| Chilled                                    | 5 50              |
| Powder, F.F.G., keg                        | 4 70              |
| F.F.G.                                     | 5 00              |
| Tinware, pressed, retinned                 | 70 and 10 p.c.    |
| " plain                                    | 75 and 2 1/2 p.c. |
| " pieced                                   |                   |
| Japanned ware                              | 37 1/2 p.c.       |
| Enamelled ware, white                      | 45 p.c.           |
| " Famous                                   | 50 and 10 p.c.    |
| " Imperial                                 | 50 and 10 p.c.    |
| Green Wire Cloth                           | 1 55              |

## PETROLEUM.

|                      |          |
|----------------------|----------|
| Water white American | 27 1/2 c |
| Prime white American | 25 1/2 c |
| Water white Canadian | 25 1/2 c |
| Prime white Canadian | 24 1/2 c |

## SCRAP.

|                        |                   |
|------------------------|-------------------|
| No. 1 cast iron        | \$14 to 15        |
| No. 2                  | 7                 |
| Wrought iron scrap     | 5                 |
| Copper (heavy)         | 8 1/2 c. per lb.  |
| Yellow brass (heavy)   | 7 1/2 c. "        |
| Light brass, raw       | 5c. to 6c. "      |
| Lead pipe, or tea lead | 2c. to 2 1/2 c. " |
| Zinc scrap             | 1c. "             |

## PAINTS, OILS AND GLASS.

|                                                 |                  |
|-------------------------------------------------|------------------|
| White lead                                      | \$5 00 to \$5 50 |
| Putty in bladder, 2 1/2 lb., in keg of 100 lbs. | 0 02 1/2         |
| Turpentine, pure in barrels                     | \$ 0 87          |
| Less than barrel lots                           | 0 92             |
| Linseed oil, raw                                | 0 55             |
| Boiled                                          | 0 58             |

## WINDOW GLASS.

|                                                                                                                                             |                |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Single 1st break, up to 25 miled. inches, \$3.50; 26 to 40, \$3.75; 41 to 50, \$4.25; 51 to 60, \$4.75; 61 to 70, \$5.25, in 100-ft. boxes. |                |
| Lubricating oils, heavy castor machine                                                                                                      | 0 29           |
| " extra engine                                                                                                                              | 0 27           |
| " dynamo                                                                                                                                    | 0 35           |
| " black                                                                                                                                     | 0 22           |
| " cylinder                                                                                                                                  | \$0 50 to 0 75 |
| (as to quality)                                                                                                                             |                |
| Harness oil                                                                                                                                 | 0 50 to 0 60   |
| Neatsfoot oil                                                                                                                               | 1 00           |
| Vegetable oil, 1st pressure                                                                                                                 | 1 00 1/2       |
| " 2nd pressure                                                                                                                              | 1 09 1/2       |

## LONDON METAL MARKET.

September 9.

**Pig Iron**—Scotch warrants Glasgow closed at 50s 3d, there being a reduction of 1s 6d since last week. Middleboro No. 3 foundry closed at 43s 3d, being an advance of 3d since last week.

**Tin**—Spot tin opened steady at £126 futures £126 10s, and after sales of 180 tons of spot and 300 tons of futures, closed easy at £125 17s 6d for spot and £126 5s for futures, making price as compared with last issue £2 higher for spot and £1 15s higher for futures.

**Copper**—Spot copper opened easy at £57 5s, futures £57 6s 3d, and after sales of 100 tons of spot and 150 tons of futures, closed easy at £57 5s for spot and £57 6s 3d for futures, making prices as compared with last week, 1s 3d lower for spot and same for futures.

**Lead**—The market closed at £11 13s 9d, 1s 9d higher than last week.

**Spelter**—The market closed at £22 12s 6d, making price as compared with last week 3s 9d lower.

## BRUSH AS SOUVENIR.

Stewart & Wood, paint and glass merchants, 82 and 84 York street, Toronto, are giving out to their customers as a useful souvenir a clothes brush, with the following inscription on the back: "We brush aside all competition."



## TECHNICAL BOOK REVIEWS.

**The Engine Runner's Catechism.**—

A catechism on how to erect, adjust and run the principal steam engines used in Canada and the United States; by Robert Grimshaw, M.E.; sixth edition; 393 pages; fully illustrated. Sold in Canada by the Book Department of Hardware and Metal for \$2. This book is intended to instruct as to how to erect, adjust and run the chief designs of stationary engines

in use in Canada and the United States. It describes the principal features of various, special and well-known makes of engines. The questions are put and the answers are given

in a direct, simple and easily understood style. All instructions given are complete and up-to-date and are devoid of technical and mathematical formulæ. The young engineer will find this a very valuable book of reference, and should information be required concerning any design of engine it can readily be found in this book. The various engines described and illustrated include: Armington and Sims, Atlas side valve, Bulkey, Cumner, Eclipse Corliss, Fitchburg, Greene, Ide, Porter Allan, Porter Hamilton, Putnam, Russell, Straight-line, Twiss, Watertown, Wheelock, Westinghouse standard.

**Liquid Air and the Liquefaction of Gases.**—The theory, history, manufacture and practical application of liquid air and other gases by T. O'Connor Sloane, Ph.D.; second edition; 365 pages; illustrated; cloth binding. Sold in Canada by the Book Department of Hardware and Metal for \$2.50. This work gives the history of the theory, discovery and manufacture of liquid air, and contains illustrations and descriptions of all the experiments that in the past have excited the wonder of the world. It is a book not only for the scientific investigator, but also for the general reader interested in this subject. A review of the contents might be given as follows: Physics, including a consideration of the three states of matter, solid, liquid and gaseous; heat and its measurement, including the different classes of thermometers for measuring

degrees of heat; heat and its effect on gases, including a consideration of the energy expended in heating gases; physics and the chemistry of the air, being a description of the constituents, etc., the Royal Institution of England; Michael Faraday, his life and work; early experimentors and their methods; Raoul Pictet, his life and work; the life and work of Louis Paul Caillelet; Sigmund von Wroblewski and Karl Olszewski, James Dewar, Chas. E. Fifer; descriptions of different experiments.

**Locomotive Breakdowns, Emergencies, and Their Remedies.**—An up-to-date catechism, treating on accidents and breakdowns on the road and how to repair them, by Geo. L. Fowler, M.E.; 250 pages, 7x5 inches; illustrated; cloth binding.

Sold in Canada by Book Department of Hardware and Metal for \$1.50. This work treats in full all kinds of accidents that are likely to happen to locomotive engines while on the road and also their remedy. The various types of compound locomotives are included in the treatise. This book should prove of immense value to all locomotive engineers and firemen.

The contents may be summarized as follows: Defective valves, accidents to the valve motion, accidents to cylinders, steam chests and pistons; accidents to guides, crossheads and rods; accidents to running gears; truck and frame accidents; boiler troubles; defective throttle and steam connections; defective draft appliances; pump and injector troubles; accidents to cab fixtures; tender accidents; miscellaneous accidents; compound locomotive accidents; tools and appliances for making engine repairs; air brake troubles; aid to injured.

**The Hardening, Tempering, Annealing and Forging of Steel.**—A treatise on the practical treatment and working of high and low grade steel; by Joseph V. Woodworth; 280 pages, 9x6 inches; 200 illustrations; bound in cloth. Sold in Canada by the Book Department of Hardware and Metal, Toronto, for \$2.50. This is a most complete work on this subject, and that subject being such a vital one in the machine shop, it should prove of very great value to the machinist. Its contents may be indicated under the following headings:

Steel—its selection and identification—the treatment of well-known brands of steel; annealing processes—the annealing of malleable castings; the heating and cooling of steel—the use of furnaces and heating machines—tough steel and hard steel; the hardening of steel in water, brine, oil and solution—special processes; tempering, and the different ways of accomplishing it; case-hardening processes—the use of machinery steel for cutting tools; hardening and tempering milling cutters; treatment of small tools; treatment of dies; forging and welding of steel and iron—drop forgings; miscellaneous points of use in metal working; grinding and the different ways of doing it.

## PERSONAL MENTION.

Mr. W. G. Burton has succeeded Mr. W. J. Muir as manager of the Canadian Cordage Co.'s branch in Montreal. Mr. Burton is an experienced and practical cordage man and will no doubt meet with success in his new position.

The genial and versatile Mr. W. H. Evans, of the Canada Paint Co., has just returned from a two months' trip to Europe. Mr. Evans is looking well after his trip and reports having had a most profitable time.

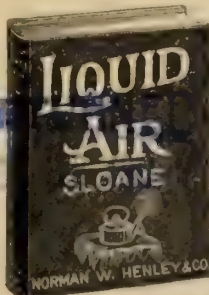
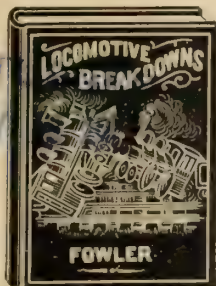
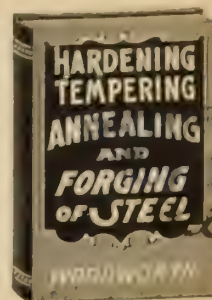
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MANUFACTURED BY  
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HAMILTON, ONT.

**WALTER CROSE**, Sole Selling Agent, Montreal  
We also make the **SHELLEY** and **BRILLIANT** Edison Type Lamps.





## CONDENSED OR "WANT" ADVERTISEMENTS.

Advertisements under this heading, 2c. a word first insertion; 1c. a word each subsequent insertion.

Contractions count as one word, but five figures (as \$1,000) are allowed as one word.

Cash remittance to cover cost **must** accompany all advertisements. **In no case** can this rule be overlooked. Advertisements received without remittance cannot be acknowledged.

Where replies come to our care to be forwarded, five cents must be added to cost to cover postage, etc.

### YEARLY CONTRACT RATES.

|                           |          |         |
|---------------------------|----------|---------|
| 100 words each insertion: | 1 year   | \$30 00 |
| "                         | 6 months | 17 00   |
| "                         | 3 months | 10 00   |
| 50 "                      | 1 year   | 17 00   |
| "                         | 6 months | 10 00   |
| 25 "                      | 1 year   | 10 00   |

### SITUATIONS VACANT.

**MANAGER**, traveller or assistant—thorough knowledge hardware, paints and colors; 20 years' experience; thoroughly energetic; very smart salesman, total abstainer; age 35; Highest credentials. "Dominion," **HARDWARE AND METAL**, Montreal. (37)

**MANAGER**, thorough knowledge hardware; 20 years' varied experience; used to organization and administration of a large corporation; undoubted ability; total abstainer; age 35. "Independence," **HARDWARE AND METAL**, Montreal. (37)

**WANTED**—Tinsmith, must be sober, reliable and industrious. Apply at once stating wages and references. Acer & Whedon, Medina, N.Y., U.S.A. (37)

**WANTED**—Stove plate moulders and boys to learn the moulding trade. The Gurney Foundry Company, Limited, Toronto. (37)

### SITUATION WANTED.

**BY ENGLISHMAN**—7 years' experience in first-class hardware firm in old country. Apply Box 172, **HARDWARE AND METAL**, Toronto. (38)

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**HARDWARE** business wanted in live city or first-class town of not less than five thousand population, located in good farming community. Apply Box 146, **HARDWARE AND METAL**, Toronto. (25tf)

**RETAIL** hardware business for sale; one of the largest and in best location in Toronto; largely cash business; in good running order; turnover for 1903 over \$35,000; can easily be increased to \$50,000; stock and tools about \$9,000. For particulars and terms address Box 152, **HARDWARE AND METAL**, Toronto, Ont. (28tf)

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**\$2** TORONTO and MONTREAL **\$2**

## ASBESTOS: ITS QUALITIES, SOURCES OF SUPPLY AND USES DESCRIBED.

By A. LEONARD SUMMERS, London, England.

**A**LTHOUGH the ancient Romans and Greeks appear to have discovered this wonderful mineral and somewhat of its properties, the modern world has only half a century's knowledge of it, and it is a less period still that asbestos has been mined and worked on a commercial basis—which makes one marvel at the rapid strides taken in this direction, inasmuch as the asbestos trade of to-day is one of the most extensive and flourishing industries, with a tremendous future and possibilities.

The Dominion of Canada has reason for proud satisfaction in the fact that its soil yields the second best quality of asbestos the world can at present produce, and its area of operations is large and supply practically unlimited. Italy, of course, yields the finest and most valuable kind of asbestos—longer, stronger, and more silky in fibre, and, consequently, more suitable for spinning, weaving, etc. In South Africa and certain parts of East Russia fair specimens of the mineral are obtained, but these are not to be compared with the Italian and Canadian output. Indeed, the African asbestos (blue in color) will not resist fire, owing to the large percentage of iron and salt it contains. Italian asbestos contains nearly 80 per cent. silicate of magnesium and only about three per cent. oxide of iron; whereas African asbestos often has as much as 40 per cent. oxide of iron and only about 50 per cent. silica. Almost all countries produce some kind of asbestos, but invariably it is too stoney and brittle for manufacture, and, consequently, the Italian and Canadian are the only two of any real value to the markets.

Dr. Ellis, of the Geological Survey of Canada, has stated that the mineral asbestos proper—the Italian kind—belongs to the hornblende minerals, while that which comes from Canada is really not asbestos proper, but a serpentine rock called chrysotile. This occurs in veins of the great belt of serpentine rocks of the Eastern Townships of Quebec, also portions of the townships of Thetford, Ireland, Coleraine and Wolfetown. The marketable asbestos is of a greyish-green shade, and the veins vary in thickness from a mere thread up to three or four inches. That from the wider veins is classed as grade No. 1, and is used for spinning and weaving; the shorter fibre and that containing impurities are classed No. 2 and No. 3 respectively and are generally used for making millboard, boiler and pipe covering, etc., which pur-

poses they answer admirably on account of their absolute non-conductivity.

Specimens of Canadian asbestos were exhibited at the International Exhibition, London, in 1862, but it was not until 1878 that the first serious mining operations were attempted. Even then only 50 tons were taken out, and some difficulty was experienced in disposing of them. To-day quite a number of mining companies are busily engaged in the work, exporting thousands of tons to all parts of the world, and asbestos has become quite indispensable to steam and machinery users everywhere.

Mining in Canada with the aid of steam derricks, compressed air drills, etc., is comparatively simple to that in Italy, where hand labor is necessary owing to the rugged nature of the ground, and operations there are extremely dangerous by reason of frequent landslips and avalanches. The mines are situated at heights of from 3,000 to 7,000 feet above sea-level, but the climate is sufficiently mild to enable work to continue the whole year in most places.

From Italy is obtained the very long, silky fibre, known as "floss" (used in gas stoves), which, however, is very scarce of late years. This fibre, the most expensive of any, is usually worth 10s. per pound, but owing to diminishing supplies its value is now much greater. The common asbestos fuel (in lumps) which is seen in gas stoves is, of course, plentiful and cheap enough, as this contains but little fibre and is made up from the lowest grade and powdery asbestos. Hardware and metal manufacturers would do well to turn their serious attention to asbestos, as there is an ever-increasing demand for stoves containing it, asbestos mats, fire-screens and other domestic articles. Fire-screens particularly there exists a big field for, and they admit of varied and artistic treatment as regards the framework, which the designer should turn to profitable account. Frequently fires occur in private and public buildings as a direct result of sparks and burning coal flying from unprotected grates, and in houses where there are children the results are far too often fatal. A coroner in this city held an inquest regarding the death of a little girl from one of these accidents, and he remarked: "To the absence of fireguards is due many deaths. In 200 cases which have lately occurred in central London in which children have been fatally burnt, I find that in only one instance was a fire-



guard provided." This speaks volumes and is surely sufficient for enterprising firms to supply the remedy, for which a ready market is undoubtedly awaiting. Personally I am strongly in favor of fireguards becoming universal, and consider that the public should be educated to regard them as necessities. I have recently designed a combined fireguard, fire-irons rest and flower stand (three articles in one), and if any metal maker cares to communicate with me I will willingly send him details of the design. Such a combination, apart from its general utility, forms quite a decoration to the home, and if manufactured artistically and sold cheaply, would not fail to create an immense demand.

The majority of asbestos goods are at present used in engineering, as packing, joints, cloth, millboard, carded fibre (for steam cocks, etc.), non-conducting compositions for boiler and steam-pipe covering, etc., and for electrical purposes, millboard and woven tubing, flexible or otherwise, serve well for electric light leads, etc., asbestos paper and paper-strip, or tape, is largely used by electricians, as also putty, cement, fireproof paints, etc., manufactured from the powdery asbestos. These paints will stand actual contact with the flames and are acid-resisting. Many of London's public buildings are protected with them, and an enormous demand exists for them throughout the world. There is also a fireproof liquid made from asbestos which will effectually protect curtains, lace, upholstery, etc., from fire. The paper is capable of being embossed with artistic designs, and thus we get another valuable protection in the form of wallpaper, ceilings, dadoes, door-panelling, etc. All these articles are adopted by theatres extensively, but I am sorry to say that scarcely half the number of our theatres are adequately equipped in this way, otherwise such disasters as that at Chicago recently would not happen. With concrete or asbestos-tile flooring and otherwise decorated and protected as I have here shown, a fire could not possibly spread in a theatre, and could be easily and speedily checked—knowing which there would be but a remote chance of stampede among the audience. As it is, however, most managers are disinclined to do anything beyond the regulation compulsory fireproof curtain.

The embossed decorations referred to have frequently proved their value in checking the spread of fires, and it will be fresh on the memory that they were instrumental in this respect on the 26th of January last, when a fire broke out in a large tenement in New York, risking the safety of 13 families, who es-

caped to the roof until rescued by the firemen. It became apparent that the flames could not penetrate the ceilings covered with asbestos decorations, hence little damage was done. It was afterwards suggested that the municipality pass an ordinance compelling all houses in the future to have similarly made ceilings.

Asbestos cloth is treated in various ways. Pure cloth is used for filtration of acids and other liquids, also for making suits of clothes, gloves, helmets, etc., worn by furnacemen, electricians, and others, whilst some of the cloth is combined with woven wire and proofed with rubber, forming what is called asbestos and rubber woven sheeting, tape, rings and packing. A special kind of treatment makes both fireproof and waterproof cloth. The curtains for theatre stages are always wire woven, which gives them greater strength. Asbestos metallic fireproof curtains have nearly everywhere superseded the old style of sheet-iron curtain, which could not be considered really effectual, as such, when exposed to fire, got red hot and "buckled." Some years ago an asbestos cloth curtain saved the entire stage and its effects from the conflagration at the Queen's Theatre, Manchester. The whole auditorium was destroyed, and, although exposed to a fierce furnace, the curtain exhibited little or no damage after it, whilst many large iron columns and girders had been melted!

Since the Chicago scare theatrical managers have begun to awake to the qualities of asbestos and are using it liberally. The London Alhambra has fireproofed everything on its stage—even the ballet-girls' costumes that have to display electrical fittings.

As previously hinted, new uses for asbestos are continually being discovered, and when it becomes more generally understood and universally adopted many valuable (and perhaps startling) inventions will be the outcome. Occasionally I meet with gentlemen experimenting scientifically with this mineral, so I am assured of some big things eventually from these signs of healthy activity. Two gentlemen I know are at the present time turning asbestos to use in connection with dentistry and the purification of air respectively. And in America I am interested to observe that a liquid of asbestos and other ingredients has just been invented to effectually cover electrical wires, thereby preventing "live" wires from fusing (as in the Paris underground railway disaster), and electrocution accidents arising from falling cables of overhead tramways.

Undoubtedly the asbestos industry has a splendid future before it, connected as it is with so many and varied trades and professions, and speculators large or small looking for safe and advantageous investments may be recommended to carefully note the fact.

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## Merrick, Anderson & Co.

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For Soft, Hard or Lignite Coal, Coke, Etc.

Made by the D. Moore Company,  
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For  
Soft Coal  
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Lignite  
Slack, etc.

Heavy  
draw  
centre  
shaking  
grate and  
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Heavy or-  
namental  
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MANITOBA DEPOT

Merrick, Anderson & Co.  
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## STRATHCONA DOUBLE HEATER

| No.  | Diameter of Body | Approximate<br>Shipping Weight |
|------|------------------|--------------------------------|
| 1115 | 15 inches        | 184 pounds.                    |
| 1118 | 18 "             | 271                            |



## PAINT, OIL AND BRUSH TRADES

### Yellow Ochre.

**Y**ELLOW OCHRE is one of the most widely used and shamefully abused pigments which nature has spread broadcast for the use of man. Let us consider its origin and composition. Passing along some country road you will see a small stream oozing from the side of a bank—the sides are stained with iron rust, and as it forms little pools beside the road these are covered with an oil-like iridescent film. Follow this little stream down to some pond and you will find at the bottom a deposit of rust-stained clay and sand mixed with molding vegetable matter. This is the origin of your ochre deposits, which, when extremely pure, are known as siennas or bog iron ores, says The Paint, Oil and Drug Review.

These ochres have been shown to be deposits of iron, clay and sand of varying degrees of purity, which have in past times accumulated in the bottom of some pond or bog, and to be of commercial value must be fairly extensive, since their proper preparation entails considerable work and machinery. The better grades are carefully wet-screened to remove the coarser particles, plant roots, etc., and then carefully washed and floated to remove the coarser sand grains and grits and organic matter, and finally dried and powdered; in fact, the letters by which the various grades of French ochre are designated, refer to this very washing. The terms J. F. L. S. marking the imported French "A" means June, Fine Lave, Superieur or Yellow Fine Washed Superiorly. This certainly could not be said of the "C" domestic priming ochre, unless it was meant that this was the coarse gritty tailings from which all the desirable pigments had been washed out, leaving only the objectionable features behind. Such products, hand mixed and full of dry lumps and air spaces or ground with inferior oils—to meet a price—are at present but too often the cause of serious trouble in painting.

When an ochre is to be used as anything like a solid color, whether in shades like olive green or as a primer, the actual percentage of oxide of iron present, provided it is reasonably high, say 15 per cent., is of secondary importance, and by no means exactly represents its tinting strength, for example, the domestic ochre "B" with only 15.6 per cent. iron oxide is stronger although not as clear in tint as the French ochre

"A." The main constituents of this pigment, as a reference to the analyses will show, are clay and silica, and as it is chiefly with this clay and silica that the paint must be prepared, the most careful consideration must be given to the base of the ochre. We might say that the color will take of itself.

Clay, or kaolin, as it is frequently called, differs very widely in its character; some deposits are extremely mushy and transparent when mixed with oil, others much more dense and opaque. Again we find deposits scaly and greasy like soapstone and in the worst possible condition to use in paint. So with the silica or sand present, wash or sedimentary deposits of this kind vary greatly both in fineness and opacity, it may be coarse and sandy or soft and fine.

Still another feature which has never been given proper attention in the past and which only a well-equipped chemical laboratory can consider, is the presence of vegetable which never should have

been mined and are sent out half prepared, without opacity and full of organic matter and sand. Such ochres are often mixed by hand and applied full of air spaces and cuts where the sand grains have sagged down, or, what is worse, ground with some cheap concoction in place of linseed oil.

Such being the case, is it to be wondered at that the paint manufacturer who is trying to make an honest durable paint holds up his hands in holy horror when he learns that an ochre primer has been used as a foundation for his paint.

With a ground ochre, freedom from objectionable organic matter can only be determined by weather exposure tests, but the use of a high grade article upon which the proper expenditure of labor has been made to properly wash and prepare it, when coming from a reliable firm having the facilities for making such tests on dry ochre, is an added safeguard.



SEE our  
exhibit of



Maple Leaf Varnishes, Enamels,  
Stains. Dry Colors, Paste Colors.  
Hollywood Paint, etc.,

Manufacturers Building, Toronto Exhibition.

**The Imperial Varnish & Color Co.**

LIMITED,

TORONTO, ONTARIO, CANADA.





## Clothed with Authority

The dealer who sells the preparations of the STANDARD PAINT & VARNISH CO., of Windsor, has a power not possessed generally. His every word of commendation is clothed with authority. We stand back of every high promise he makes concerning the trustworthy character of our goods. This feeling of confidence has been experienced by sellers of paints and oils of our making everywhere and our trade has grown apace. We are always looking for new customers. We welcome your account if it is not already given to us.

STANDARD PAINT & VARNISH CO., Limited, Windsor, Ont.

R. E. THORNE, 768 Craig St., Montreal.

WHOLESALE AGENT AND IMPORTER.

### BRONZE POWDERS

Imitation Gold Leaf, Aluminum Leaf, Schlag Metal, Lefranc Gold Size, Bronze Liquids, etc.

TORONTO OFFICE: No. 29 Melinda Street



WE WANT YOU  
TO TRY—

### SOLARINE

SHALL WE SEND YOU  
SAMPLE ORDER?

—MONEY BACK—

“SOLARINE” POLISHES

60 George St., Toronto, Ont.

## Linseed Oil

To-day's price in London is £18 15 od. I offer 50 barrels, raw, at £17 15s od, c.i.f. Montreal, which price with duty is less than 41c. per gallon. Also 50 barrels refined at £19 5s od, c.i.f. Montreal.

J. W. L.,  
P.O. Box 1157,  
Montreal.

## McCaskill, Dougall & Co.

Manufacturers

RAILWAY, CARRIAGE AND BOAT VARNISHES.

HIGH GRADE FURNITURE and HOUSE VARNISHES

MONTREAL.

## ABOUT GLUES

What kinds do you handle? Are you and your customers satisfied? Perhaps we can give you a better article at a fairer figure. Our SCOTCH GLUES will be found of exceptional strength, and equal to many glues for which much higher prices are charged. Let us send samples.

GROVE CHEMICAL CO. Ltd., Appley Bridge, Lancashire, Eng.

## We Have the Glass You Want

—THE PRICE IS RIGHT.—

Our Distributing Centres keep down your freight charges and give a speedy delivery

The Consolidated Plate Glass Co., of Canada, Limited

TORONTO MONTREAL LONDON  
OTTAWA WINNIPEG.



## The Best Paint Store

There is one store in every town known to be the best. Best because its goods are best. The best paint stores invariably sell “ISLAND CITY” paints.

If you are ambitious, get in line.

P. D. DODS & CO., Montreal, Toronto, Vancouver



# Paint and Oil Markets

## Quebec.

Office of HARDWARE AND METAL.

232 McGill-street.

Montreal, Sept. 8, 1904

FOR the month of September a fair volume of business is being done, probably induced by the exceedingly bright weather, the absence of dust being conducive to painting operations.

There are no market changes to note, all lines continuing steady. The manufacturers do not anticipate any great rush during the month. Numerous Fall fairs and exhibitions have a temporary detrimental effect on the general painting business.

**Ground White Lead**—Best brands, Government standard, \$4.50; No. 1, \$4.25 to \$4.40; No. 2, \$4 to \$4.10; No. 3, \$3.67 1-2 to \$3.77 1-2; No. 4, \$3.30 to \$3.40, all f.o.b. Montreal.

**Dry White Lead**—\$4 in casks and in kegs \$4.25.

**Dry White Zinc**—Pure dry, in casks, 6c; in 100 lb. kegs, 6 1-2c; No. 1 zinc, in casks, 5c; in 100 lb. kegs, 5 1-2c.

**White Zinc (ground in oil)**—Pure, 25 lb. irons, 7 1-2c; No. 1, 6 1-2c; No. 2, 5 1-2c.

**Putty**—Bulk, in barrels, \$1.40; in 25 lb. tins and irons, \$1.70; bladdered putty in barrels, \$1.65.

**Orange Mineral**—Casks, 7c; 100 lb. kegs, 7 1-4c; smaller quantities, 8 1-4c.

**Red Lead**—Genuine red lead in casks, \$4; in 100 lb. kegs, \$4.25; in less quantities, \$5.25 per 100 lbs. No. 1 red lead, casks, \$2.75; kegs, \$4, and smaller quantities \$5.

**Litharge**—Ground, casks, 5c; in less quantities, 5 1-2c; flake litharge, casks, \$5; smalls, \$5.50 per 100 lb.

**Turpentine**—Single barrels, 83 1-2c per gallon; two to four barrels, 82 1-2c

**Turpentine**—Single barrels, 82 1-2c per gallon; two to four barrels, 81 1-2c per gallon. For smaller quantities than barrels, 5c extra per gallon is charged. Standard gallon of 8.6 lbs.

**Linseed Oil**—Raw, 1 to 4 barrels, 45c to 46c; 5 to 9 barrels, 44c to 45c; boiled, 1 to 4 barrels, 48c to 49c; 5 to 9 barrels, 47c to 48c. Delivered in Ontario between Montreal and Oshawa at 2c per gallon advance.

**Shellac Varnish**—Pure white, \$2.80

to \$3; pure orange, \$2.75 to \$2.85; No. 1 orange, \$2.45 to \$2.60.

**Mixed Paints**—\$1.20 to \$1.40 per gallon.

**Castor Oil**—8 3-4 to 9 1-4c in wholesale lots, and 1-2c additional for small lots.

**Canadian Paris Green**—Barrels 13 1-4c; arsenic kegs 13 1-2c; 50 and 100 lb. drums, 14c; 25-lb. drums, 14 1-4c; 1 lb. packages, 15c; 1-2-lb. packages, 17c;

**English Paris Green**—Barrels, 14 1-4c; arsenic kegs, 14 1-2c; 50 and 100 lb. drums, 15c per lb.; 25 lb. drums, 15 1-2c; 1 lb. paper boxes, 16c; 1 lb. tin boxes, 17c. Terms, 2 per cent. 30 days; 90 days net.

## Ontario.

Office of HARDWARE AND METAL.

10 Front street east.

Toronto, Sept. 9, 1904.

THERE is very little change in this market this week. The business being done in mixed paints is only fair. White lead is quite active, however. Glass is beginning to pick up well now. There will be a very brisk local and also outside demand for glass this Fall on account of the good building season. Glass still holds firm. Turpentine is unchanged on the local market, but in the south it is slightly easier. The market there is quite unsettled, prices having fluctuated somewhat during the past week. Linseed oil still holds firm on the local market. On the British market, however, it sold higher this week. All quotations remain unchanged.

**White Lead**—Ex-Toronto, pure white lead, \$4.65; No. 1, \$4.20; No. 2, \$3.90; No. 3, \$3.50; No. 4, \$3.25 in packages of 25 lb. and upwards; 1-2c per lb. extra will be charged for 12 1-2 lb. packages; genuine dry white lead, in casks, \$4.25.

**Red Lead**—Genuine in casks of 560 lb., \$4.25; ditto, in kegs of 100 lb., \$4.50; No. 1, in casks of 560 lb., \$3.75 to \$4; ditto, in kegs of 100 lb., \$4.25.

**White Zinc**—Genuine French V.M., in casks, \$6 to \$6.25; Lehigh, in casks, \$6 to \$6.25.

**Shingle Stain**—In 5 gallon lots, 60 to 85c per gallon.

**Paris White**—90c to \$1 per 100 lb.

**Whiting**—60 to 65c per 100 lb.; Gilders' whiting, 75c.

**Shellac**—Pure orange, in barrels, \$2.50 to \$3; white, \$2.50 per gallon, No. 1, \$2.37 1-2, including price of can.

**Linseed Oil**—Our quotation is: Raw, 1 to 4 bbls., 47c; boiled, 50c; 5 to 9 bbls., raw, 46; boiled, 49, Toronto, Hamilton, London, Elora and Guelph, net 30 days. Advance of 2c for delivery to outside points.

**Turpentine**—Single bbls., 82c; 2 to 4 bbls., 81c; 5 bbls. and over, f. o. b. point of shipment, net 30 days. Another quotation is: Single bbls., 83c; 2 to 4 bbls., 82c; 5 bbls. and over, open ex-Toronto, with 2 per cent. off 30 days. For less quantities than barrels, 5c per gallon extra will be added, and for 5 gallon packages, 50c, and 10 gallon packages 80c, will be charged.

**Glues**—Broken sheet, in 200 lb. bbls., 8 to 8 1-2c per lb.; cabinet glue, in bbls., 11 1-2 to 12c; emery glue, in bbls., 17c; bookbinders', ground, 10 1-2c; finest American, white, 19c; No. 1 American white, 15c per lb.

**Putty**—Common, \$1.65; pure (linseed oil) bladders in barrels, \$1.70; bladders, in 100 lb. kegs, \$1.85; bulk in barrels, \$1.45; bulk less than barrels and up to 100 lb., \$1.70.

**Plaster Paris**—New Brunswick, \$2 per barrel.

**Liquid Paints**—Pure, \$1.20 to \$1.40 per gallon; No. 1, \$1.10 per gallon.

**Barn Paints**—55 to 70c per gallon.

**Bridge Paints**—75c to \$1.

**Castor Oil**—English, in cases, 7 1-2 to 8c per lb. and 8 1-2 to 9c for single tins.

**English Paris Green**—Petroleum bbls., 13 1-4c; arsenic kegs, 13 1-2c; 50 to 100 lb. drums, 14c; 1 lb. packages, 15c; 1 lb. tins, 16c; 1-2 lb. tins, 18c.

**Canadian Paris Green** (present delivery)—Petroleum bbls., 13 3-4c; arsenic kegs, 14c; 50 and 100 lb. drums, 14 1-2c; 1-2 lb. tins, 18 1-2c.

## Window Glass.

MONTREAL.

No agreement was reached last week between the glass manufacturers in Belgium and their employes, and as a result the glass factories there will be closed during September and October. This will not only effect the supply coming to Canada, but an advance in price may be looked for any time. We quote:



# McArthur, Corneille & Co.

MONTREAL

## Glue and Gelatine

An extensive assortment, to suit all requirements.  
WILL BE PLEASED TO SUBMIT SAMPLES AND PRICES

MANUFACTURERS AND IMPORTERS OF . . .

White Lead, Oils and Colors,  
Prepared Paints, Window  
Glass, Varnishes, Etc.

SELLING AGENTS IN CANADA

For the GENUINE  
Imperial French Green  
of JOHN LUCAS & CO.,  
PHILADELPHIA

And CELEBRATED  
English Varnishes  
of CHAS. TURNER & SON,  
LONDON.

Please mention **HARDWARE AND METAL** when writing.



**Every little helps.**

Sell more lye.

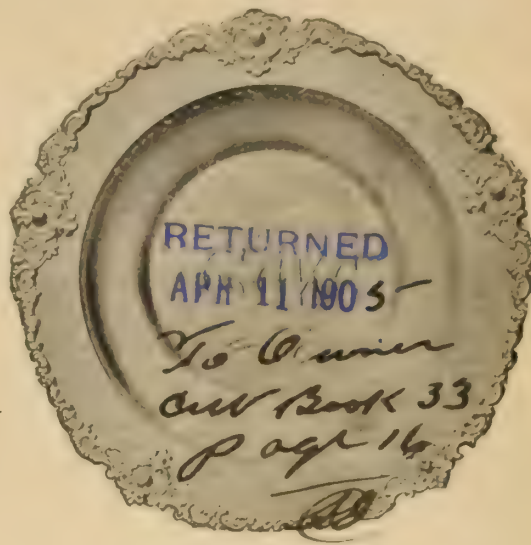
# Gillett's Lye

of course. Every sale adds to  
your profits. The hundred and  
one uses of Gillett's Lye make  
it a fine seller.

Send for circular of suggested uses  
if you haven't one already.

**E. W. GILLETT COMPANY LIMITED**  
TORONTO

*Silverware that sells.*



## Standard Silverware sells because

It is the highest grade of electro-plate  
manufactured.

It is absolutely reliable—will wear for  
years and years.

It is "value received" always.

It is designed by artists and executed  
by craftsmen of skill and long training.

It is advertised in the leading maga-  
zines, religious and secular—the people  
know it.

It bears this trade mark:



These are excellent reasons why you  
should handle

**"Standard Silverware."**

Send for our beautiful, large illustrated  
catalogue—post free, on application.

**The Standard Silver Co.**

LIMITED

Hayter Street

TORONTO.



## CANADA PAINT CO.'S BRANDS

"Elephant"

"Prism"

"Stag"

"King Edward"

## CANADA PAINT CO.'S BRANDS

Where there is anything to paint,  
paint with

The  
**Canada**  
**Paint**  
**Company's**  
**Paint**

"SCAN THE CAN"

And be sure that it bears one of the  
above brands.

The most popular paint.

The largest sale.

First break, 50 feet, \$1.60; second break, \$1.70; first break, 100 feet, \$3; second do., \$3.20; third do., \$3.70; fourth do., \$3.95; fifth do., \$4.20; sixth do., \$4.70 seventh do., \$5.20, and eighth do., \$5.70. The discount on 50 feet is 20 per cent, and on 100 feet 33 1-3 per cent. There has been no change in prices for diamond star or double thick. First break, 50 feet, \$2.30; second do., \$2.50; first break, 100 feet, \$4.40; second do., \$4.80; third do., \$5.75; fourth do., \$6.50; fifth do., \$7.50; sixth do., \$8, and seventh do., \$9. Double thick, first break, 50 feet, \$3.45; second do., \$3.75; first break 100 feet, \$6.75; second do., \$7.25; third do., \$8.75; fourth do., \$8.75; fifth do., \$10; sixth do., \$11.50; seventh do., \$11.50; eighth do., \$12.50; ninth do., \$14; tenth do., \$16.50; eleventh do., \$18; twelfth do., \$20.

TORONTO.

The local market is firm and if the market were more settled there would probably be an advance in prices, caused by the curtailment of supply from Belgium. We quote: Star first break, at \$3.80 per 100 feet, and Double Diamond, first break, at \$5.06. Discount 15 to 20 per cent. These prices are shaded on large and well assorted specifications.

### COURTESY TO CUSTOMERS.

**K**EEP your eyes on the front door. Customers should be waited on promptly and pleasantly," is one of a set of rules adopted and used by a prominent hardware firm.

There is need, perhaps, for such a rule in many hardware stores throughout Canada. There are none who do not wish to be treated courteously, and there are few who are not somewhat put about if they do not receive such treatment.

Customers come into a hardware store to make purchases, and naturally expect they will be assisted by the salesmen. It sometimes happens, however, that they do not receive the assistance they expect. Not infrequently they are left to find for themselves the part of the store containing the article they require. Having found the department they wait while some other customer is being served by the only clerk behind that counter.

A clerk from the next counter passes them with a most preoccupied expression on his countenance. His occupation is too important and absorbing to allow him to think of, let alone speak to,

a mere customer. Perhaps that clerk was not supposed to attend to customers at neighboring counters. Even if that were so the customer would have felt more at ease and better content to wait if the clerk had spoken and pleasantly suggested that the other clerk would be disengaged in a short time.

There is some excuse for this neglect on the part of a clerk, but there is absolutely none for inattentiveness on the part of a salesman to the person whom he is attending. In one large hardware store, one claimed to be among the most prominent in Canada, a customer began to tell of a purchase he wished to make, to a salesman of responsible position. Before he had concluded an under clerk came along and wanted some information. Without the sign of an apology the salesman turned from the customer, while he was yet speaking, and gave the required instructions to the clerk. That done he turned again to the customer with an enquiring look, which was exasperating in the extreme. He had forgotten what the customer had before said and repetition was necessary.

Imagine that customer's feelings! He certainly would not feel like trying his luck in that store again.

The indifference and discourtesy displayed by this salesman would have a very detrimental effect upon the other salesmen and the clerks. His manner would be noted and the others would come to regard the courteous treatment of customers as not a very important factor. Probably some of the younger clerks might even follow his example.

It should be one of the distinct duties of all managers to see that all salesmen and clerks recognize the great importance of courteous treatment of customers. To be courteous is an essential feature of all salesmen.

### THE GRUNDY STOVE CO.

Many of those interested in the stove trade found their way to the north gallery of the Transportation Building, where the Grundy Stove Co., of Guelph, have arranged an attractive exhibit. Visitors should notice particularly the Silver King ranges and wood cooks, as well as the dainty Laurel baseburners and the Oak Laurels, there being walls constructed of them. The company themselves turn out large quantities for the trade at their works at Queen and Abel streets.



## TWO HARDWARE METHODS CONTRASTED.

A GENTLEMAN who knows just enough about hardware to tell the difference between a grindstone and a carpet tack, especially if he has to turn the one or sits down upon the other, went into a hardware store in the suburbs of New York the other day and said to the man who came forward to wait upon him, "I am looking for a children's garden rake."

"A garden rake?" responded the clerk in a manner not over cordial, "how much do you expect to pay for one?"

This question and the manner in which it was uttered pleased the would-be purchaser about as much as he would have been had a bucket of cold water been suddenly poured down his spine. In the first place he simply knew enough about garden rakes to know that they consisted of a handle, frame and teeth; that they were used for the purpose of raking in a garden, and he also had an indistinct recollection that the last one he had toyed with in his days of early boyhood had been painted green. But as to quality, price, character, or con-

ditions of manufacture, he knew just about as much as he did about the manufacture of French bonnets.

Somehow he suddenly lost interest in rakes, or, to speak with more exactness, he very decidedly lost interest in this young man and in the articles for sale in that special store. Making some sort of an evasive suggestion as to putting the matter off for the present, he walked out of the store without protest from the clerk, leaving the latter in an abstracted endeavor to see what was going on on the top of a telegraph pole on the other side of the street.

The amateur investor in rakes walked down the street two or three blocks where he remembered having seen another hardware store, and, as Longfellow says, "with reluctant feet" thrust himself over the threshold, uncertain as to what kind of a conundrum would be dumped at him by some young man on the inside.

"I am looking," he said, "for a children's garden rake," and then instinctively dodged for fear that a question as to price or perhaps a paper weight would be thrown at him.

"Yes," said the clerk in a very pleas-

ant manner, "I guess we can fit you out as we have a very good variety. Let us look at what we have, and you can select one to suit you."

He led the customer to a rear counter, upon which he laid four rakes. "These comprise samples of our stock, and I believe some one of them will fill the bill."

The visitor looked them over. He picked up one that seemed to be about what he wanted. "How much is this one?" he asked.

"Twenty-three cents."

"What are the others?"

"This one is eighteen cents, that one is thirty, and this is forty."

"Is this of good material?" he asked, holding up the one for twenty-three cents. It attracted him, perhaps, because it was painted green.

"It is of good material, and no doubt it will suit your purposes as well as a higher priced one," the clerk answered, and he proceeded to discuss its good points.

"I'll take it," said the gentleman. Since then, he walks three blocks out of his way, to buy goods of this second store.—Hardware Dealers' Magazine.

# Made in Canada

The steel rail mill of

The Algoma Steel Co., Limited, Sault Ste. Marie, Ont.

is now in operation and turning out

A. S. C. E.  
Standard  
Section

# Steel Rails

of  
Highest  
Quality

Your specification will have our best attention.

Offices:

Canada Life Bldg.,  
MONTREAL.

100 King St. West,  
TORONTO.

Drummond, McCall & Co.

General Sales Agents

The Algoma Steel Co., Limited



# STOVES AND TINWARE

## SELLING AND IMPROVING FURNACES.

**I**N all parts of the United States in which hot air furnace work is done, there is sufficient competition to make the furnaceman, at times, feel discouraged that he has not secured contracts where his bids have been on high grade work and put as low as good work can be done. While too often operation builders, or others who are building, and whose only guide in selection is the price quoted by the different bidders, will not listen to an explanation of what the high-class furnaceman intends to furnish, even if they will not be influenced by the greater benefits to be derived from good work, the furnaceman should not be discouraged in his persistent recommendation of good furnace work; for in the end, it is only the good furnace work that builds up his reputation and secures for him the satisfactory increase in trade which is essential to his success. He should canvass architects, builders and carpenters, as well as the owners, and, by his persistent efforts, educate them in the course of a few years to the point of demanding from his competitors a better class of work; so that, when he bids he has a better outlook for success when he finds a customer who is desirous of getting the best he can for his money. It is a good policy to take the plans and explain in detail the why and wherefore of each and everything, so as to make a good impression on the customer, and, in case of competition, if his competitors are not equally capable of satisfying the customer that they know as much about the work, and will do it as well, the customer will decide in his favor.

Selling furnaces, is, in a large measure, a campaign of education, inasmuch as a far larger percentage of the furnaces sold every year are disposed of on a competitive basis for buildings which the builders do not intend to occupy or own. Consequently, they have little interest as to whether the buildings are satisfactorily heated or not, and whether or not they are economical

in the consumption of fuel. These conditions prevail extensively; but there is no occasion for the furnaceman to feel discouraged, when, in the early part of the season, most of the furnace work goes to contractors who are not accustomed to doing good work, and are not conscientious as to the quality of the apparatus they install, but are indifferent to the fact that it will be extravagant in the use of fuel. There are others, however, in every community, who, when properly instructed and being given careful attention, will be willing to pay the price for first-class hot air furnace work. The furnaceman gains a substantial advantage over his competitors, if he makes a canvass among those who have furnace heating systems, in order to find out if they are satisfied, and to lend his services in rearranging the work, so that better results will follow.

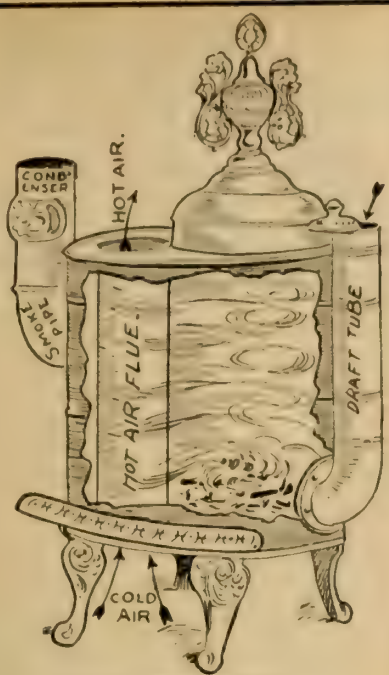
Many hot air furnacemen have no appreciation of the influence of a cold air supply on the efficiency of the furnace, nor have they the knowledge how to determine the size of the hot air pipes which should lead to the different rooms. Much of their work is consequently faulty in design and arrangement. After an owner has spent one Winter in a poorly heated house, requiring an extravagant use of fuel, he is usually willing to pay a good price to have his botch work put in better condition to serve the purpose intended. Here is where the conscientious and competent hot air furnaceman can build up a profitable business and a reputation which will secure for him much work that his competitors will not be allowed to interfere with. In some localities men make a specialty of doctoring sick jobs, so that they become widely known, and some even go to the extreme of placing signs in their show windows proclaiming that they are doctors for bad work of all kinds.

## Store Display.

**I**F the stove dealer is to secure the confidence of his customers and secure their trade he must, in some way, make up for the greater attractions in the showrooms of department stores and other new competitors for the stove trade. He must not alone depend on the passerby seeing that he is in the stove business, but must in some way, when the season opens, attract the attention of the whole community to the fact that he is prepared to supply their wants. After attention is attracted he must provide in his establishment, however large or small, a neat display of his wares. The stoves are mostly bought by the women of a household, and the man who sells stoves must bear in mind that their house-keeping is neat, well ordered and cleanly; consequently, if he is to make a favorable impression upon them his stove display must be more than neat, well ordered and cleanly, having in addition some attractive things to make their visit to his place a pleasure. Next, it will not do for him to arrange his sample room in the early Fall and expect it to hold the attention of possible buyers without changing until after the season is over. People in every locality require different types of cooking stoves, and when these different types are made the features of special display at different times they should be made to look their best, and such equipment as is ordinarily used in connection with them should also be displayed to advantage. It is only necessary for the stove dealer to exercise his mind to discover that there is little need of expenditure of money in arranging new attractions, and the labor is comparatively cheap. The usual help can be made to rearrange the sample room in an hour or so that it will look wholly different to people who were in the day before to see the stock.

The stove dealer should recognize these facts, and taking cognizance of them will be more likely to meet with a profitable trade than if he simply keeps store and waits for customers to come, and when they do come possibly find no intelligent person in attendance to explain the features of merit, the different prices, and what can be done in the way of heating an upper room by means of a drum or connections for hot water service, with price for planished iron stove pipe and the multitude of





**OUR EXHIBIT at  
LONDON and OTTAWA**

Fairs should be studied by every stove dealer. These Stoves of ours are on new lines, are powerful heaters, and comparatively low-priced. No other Stoves like them. SEE THEM SURE.

**TELEPHONE CITY STOVES  
BRANTFORD, Ont. LIMITED**



**No Smell. Never Crumbles or Falls  
Out of Place. Easy of Application—**

SUCH IS OUR

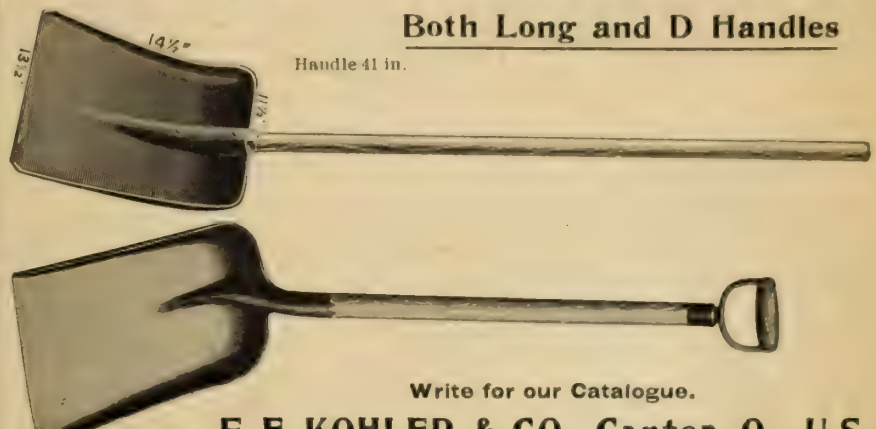
**Asbestos  
Furnace Cement**

Absolutely guaranteed. Money back if you want it.  
Cans, Tubs and Barrels. Send for Circular and Price List.

**G. F. STERN & SON, Sole Makers, Brantford, Ont.**  
**J. H. HANSON, 422 St. Paul St., Montreal, Eastern Agent**

**SNOW SHOVELS, FURNACE SCOOPS**

Both Long and D Handles



Handle 41 in.

Write for our Catalogue.

**F. E. KOHLER & CO., Canton, O., U.S.A**

# Grand Idea

## The Range that never fails.

The dealer who handles GRAND IDEA Ranges is SATISFIED WITH LIFE.

When he sells a GRAND IDEA Range to a customer, he knows that it will give perfect satisfaction in every respect.

EVERY GRAND IDEA RANGE SOLD ACTS AS A "SILENT DRUMMER." It helps sell others of the same kind.

The GRAND IDEA Range is a trade winner. You should have this range on your floor.

Our line meets favor because they are

**BUILT RIGHT  
LOOK RIGHT  
COOK RIGHT**

IF YOU ARE INTERESTED in our goods, drop us a post card and we shall be pleased to send you descriptive booklet and price list.



RETURNED  
SEP 13 1904  
Cut Book 23  
Page 55

**GUELPH FOUNDRY CO., Limited, GUELPH, ONT.**

Western Representatives: MESSRS. E. G. LOW & CO., WINNIPEG, MAN.



Persons addressing advertisers will kindly mention having seen their advertisement in Hardware and Metal.

The Best Door Closer is . . .  
**NEWMAN'S INVINCIBLE FLOOR SPRING**  
 Will close door silently against any pressure of wind. Has many working advantages over the ordinary spring and lasts twice the wear. In use throughout Canada, Britain and the Colonies. Gives perfect satisfaction. Made only by  
**W. NEWMAN & SONS,**  
 Hospital St. BIRMINGHAM

WORK AND  
 PRICES  
 RIGHT  
**GALVANIZING** ONT.  
 WIND  
**ENGINE & PUMP CO.**  
 TORONTO, ONT. LIMITED.



When placing your order for Lanterns, ask for **WRIGHT'S Cold Blast Lantern**, which is the only genuine Cold Blast Lantern made. They are the best, and we will guarantee prices against all other makers for this season and for next.

**E. T. Wright & Co., Manufacturers, Hamilton and Montreal.**

**MODERN MAGIC!**



No more matches required to light the gas.  
 Ignite. Mantle lights when the gas is turned on.  
 See our booklet and samples.

**The International Gas Appliance Co., Limited**  
 146 BAY STREET, TORONTO, Canada

Other things with which the live stove dealer can not only satisfy his customer but make an increased profit. As a matter of course, the first part of the season should be devoted to cooking stoves, but on the approach of cold weather the heating stoves that are to be displayed should be prepared so that in one night the whole stove showroom can be devoted to the display of heating stoves, and, if practicable, circulars should be distributed in the town, or a banner strung across the street, announcing to customers that a consultation with the stove dealer will enable them to defy Jack Frost. These are the methods that must be followed in this business to offset the attractions used by all outside competitors to draw the stove trade from those who once enjoyed it for their own.—Metal Worker.

#### TRADE INQUIRIES.

The names of the firms making these enquiries, can be had from the Department of Trade and Commerce, Ottawa. Persons desiring the addresses, should be sure to mention the number of the enquiry and the department from which the enquiry came.

FROM HIGH COMMISSIONER FOR CANADA.

1st. A manufacturing firm has asked to be placed in communication with lumber exporters or dealers in Canada who cut up hard maple for mangle rollers.

FROM DEPARTMENT TRADES AND COMMERCE,  
 OTTAWA.

10. A French firm interested in the export of pumice stone, black lead, glue, and gelatine, desires to be placed in touch with a reliable agent in Canada.

12. A manufacturer of metallic supplies for umbrellas, in France, wants an agent to sell his products in Canada.

16. An important French firm of automobiles wants to open up with a Canadian house willing to push the sale of French machines.

17. Manufacturers of chemical products asks for agents on the Canadian market.

18. A French firm of artistic china-ware and crockery, wishes to establish a manufacture of such goods in the Province of Quebec, is anxious to get information about such a scheme, and wishes to know what would be the best place in that province to be chosen for that purpose.

Residences in the fire swept district of Victoria, B. C., will be erected by Messrs. Kinsman, Cavin, Turnbull and Anderson.

## A Horse Nail "Don't"

Punch's advice to those about to marry was "DON'T"; and to those who are tempted by lower prices to purchase any other Horse Nails than the best, take our advice, "DON'T." Cheap Horse Nails may afford the dealer more profit, but in selling the best, which is acknowledged to be the "**C**" brand, you will have the satisfaction of making permanent customers with the Farrier who uses them, for they will undoubtedly last longer, and prove in the end more economical. It stands to reason that it should be so, and the experience of the world has become embodied in the proverbial statement that "the best are the cheapest." The best goods are not made cheaply. The "**C**" Horse Nails are not made cheaply; they are made only from the best obtainable material which is known or used for the purpose of making Horse Nails. The material of which they are made, therefore, commands the best market price. The process we use is exclusively used in our works on this Continent, and furnishes the best results in the best way. Every Nail is "hot forged" from a Rod of Swedish Charcoal Steel. Every Nail is examined by expert sorters singly before it is put into the box, in order to discover any imperfection. Every box of Nails is warranted perfect and may be returned free of all charges, if not in every respect entirely satisfactory to the purchaser. We have been making nothing else but Horse Nails for thirty-nine years, and this long experience is embodied in the Nails you buy bearing our "**C**" Brand and name. You can do all your Horse Nail trade with one brand, if it is our "**C**" Brand. Try it!

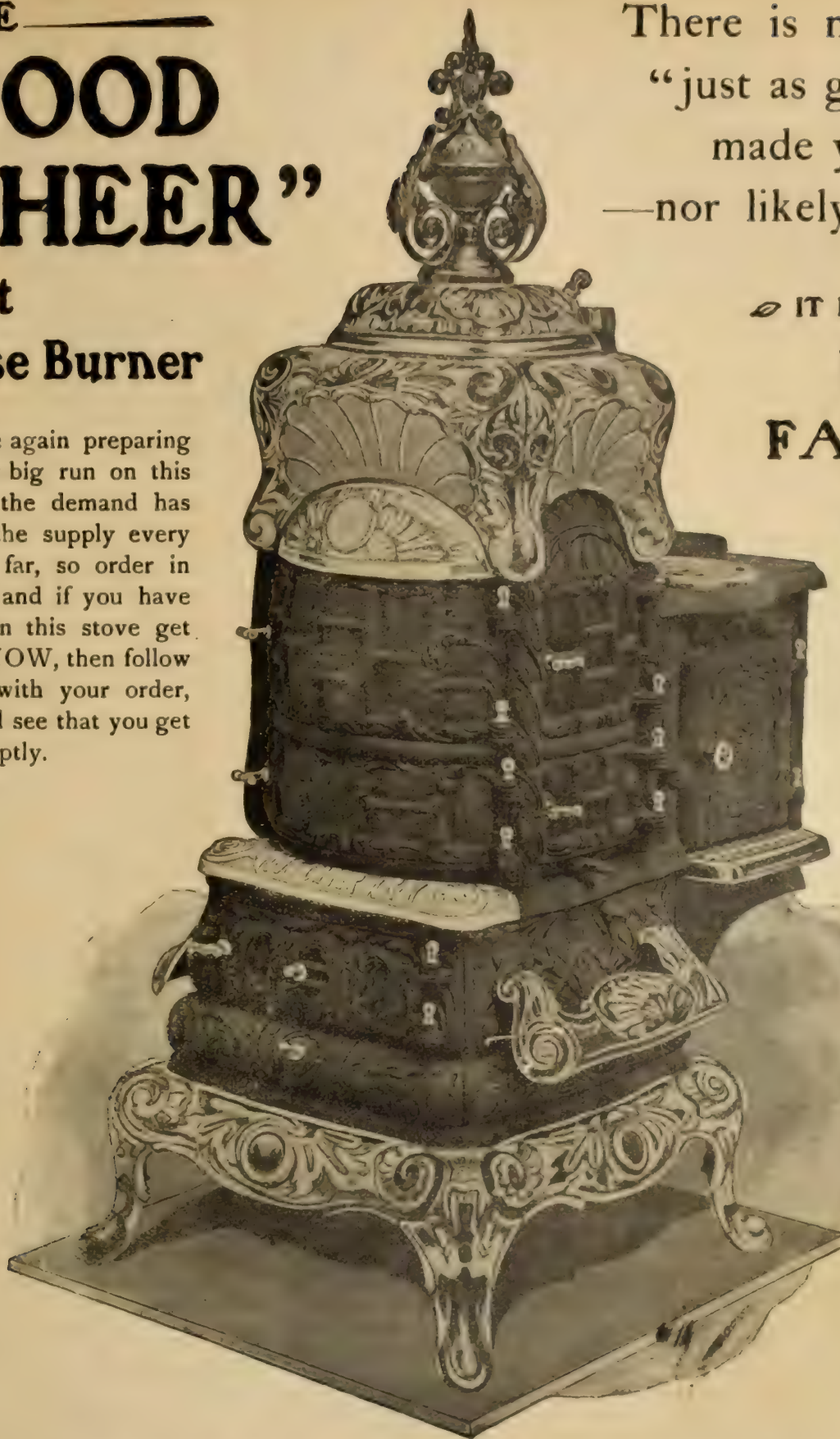
**Canada Horse Nail  
 Company, MONTREAL**



# THE "GOOD CHEER"

## Art Base Burner

We are again preparing for another big run on this stove, but the demand has exceeded the supply every season so far, so order in good time, and if you have not yet seen this stove get a sample NOW, then follow up quick with your order, and we will see that you get them promptly.



There is nothing  
"just as good"  
made yet  
—nor likely to be.

IT HAS  
**NO  
FAULTS**

Firepot removable  
without turning a  
single bolt.

Has Duplex Grate  
and large ash pan.

Every stove a  
Double Heater.

Has Steel Oven.

With or without  
oven.

The JAMES STEWART MFG. CO., Limited  
Woodstock, Ont. and Winnipeg, Man.



# HEATING AND PLUMBING

## THE NATIONAL ASSOCIATION OF MASTER PLUMBERS AND STEAM AND HOT-WATER FITTERS OF CANADA.

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President—Robt. Ross, Toronto.  
Vice-President—A. J. Hammond, Winnipeg.  
Secretary—J. G. Gordon, Montreal.  
Treasurer—F. G. Johnson, Ottawa.

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President—S. Mellon.  
Secretary—T. H. Davies.

## OTTAWA.

President—Gil. Julien.  
Secretary—J. Thorpe Blyth.

## LONDON.

President—B. Noble.  
Vice-President—Wm. Smith.  
Secretary-Treasurer—E. H. Russell.

## THE PLUMBING SUPPLIES MARKET.

### Quebec.

Office of HARDWARE AND METAL,  
232 McGill Street.  
Montreal, Sept. 8, 1904.

LAST week saw a lively increase in the demand for heating and plumbing supplies, and even better business is reported during the present week. This market is now in full swing for Fall and Winter trade, which gives every promise of being increasingly

brisk. Range boilers are in big demand for present and later installation, which in itself creates activity in pipe and fittings.

**Range Boilers**—A large amount of building has created a big demand for these on all sides. We quote as follows: Iron clad, 30 gallon, \$6, and 40 gallon, \$7.50 net; copper, 30 gallon, \$22; 35 gallon, \$24; 40 gallon, \$28. The discount on copper boilers is 15 per cent.

**Lead Pipe**—Slightly brisker than a week ago. On the whole a good business is being done. Prices remain unchanged. The price is 8c for composition waste and aqueduct and 7c for ordinary. The discount is 35 per cent. f.o.b. Montreal, Toronto, St. John, N.B., and Halifax; f.o.b. London, 15c per 100 lbs extra; f.o.b. Hamilton, 10c per 100 lbs extra.

**Soil Pipe and Fittings**—Soil pipe and fittings have been placed during the past week in considerable volume. Our quotations are as follows: Light soil pipe, 3 to 6 inches, 50 and 10 per cent.; medium and extra heavy soil pipe, 2 to 6 in., 60 per cent.; extra heavy soil pipe, 8 in., 45 per cent.; light fittings, 2 to 6 in., 50 and 10 per cent.; medium and extra heavy fittings, 2 to 6 in., 60 and 5 per cent.; extra heavy fittings, 8 in., 45 per cent.

**Iron Pipe and Fittings**—Little change has taken place in this market since last week. If anything the demand is slightly better. Concessions are obtainable on the quoted prices. We quote nominal prices as follows: Standard pipe, per 100 feet, in length under 19 ft. Black, 1-8 in., \$2.30; 1-4 in., \$2.30; 3-8 in., \$2.55; 1-2 in., \$2.85; 3-4 in., \$3.65; 1 in., \$5.20; 1-1/4 in., \$7.35; 1-1/2 in., \$8.95; 2 in., \$12.55. Galvanized—1-4 in., \$3.20; 3-8 in., \$3.45; 1-2 in., \$3.90; 3-4 in., \$5; 1 in., \$7.20; 1-1/4 in., \$10.05; 1-1/2 in., \$12.20; 2 in., \$16.85. In the above the discount on 1-8, 1-4, and 3-8 in black and 1-4 and 3-8 in galvanized is 12-1/2 per cent.; and on 1-2 to 2, inclusive, in black and galvanized is 15 per cent. Extra heavy pipe, plain ends are quoted per 100 feet as follows: Black, 1-2 in., \$4.20; 3-4 in., \$5.25; 1 in., \$7.55; 1-1/4 in., \$10.55; 1-1/2 in., \$12.75;

2 in., \$17.60. Galvanized—1-2 in., \$5.25; 3-4 in., \$6.65; 1 in., \$9.55; 1-1/4 in., \$13.25; 1-1/2 in., \$16; 2 in., \$21.90. The discount on all sizes of extra heavy pipe is 12-1/2 per cent. Coupling, 1-2 in. to 2 in., 55 per cent. discount; nipples, 1-4 and 3-8 in., 65 per cent. discount, and 1-2 to 6 in., 70 per cent. discount.

**Solder**—There is no noted change in the price of solder this week. Bar solder is quoted at 17 1/2c, and wire at 18c.

**Soldering Irons**—Prices are as follows: 1 to 1-1/2 lbs., per lb, 37c; 2 lbs and over, 34c.

### Ontario.

Office of HARDWARE AND METAL,  
10 Front Street East.  
Toronto, Sept. 9, 1904.

THE market for plumbing goods is still quiet and conditions are unchanged on the local market. Quotations also remain unchanged.

**Lead Pipe**—There is a fair business being done in this line, although the slackness of the general market is felt to some extent. We quote: Lead, 7c; lead waste pipe, 8c; discount 35 per cent.

**Soil Pipe and Fittings**—There is a quiet feeling on the market in unison with the general market. Quotations remain unchanged as follows: Medium and extra heavy pipe and fittings, 60 per cent.; 7 and 8 inch pipe, 40 and 5 per cent.

**Iron Pipe and Fittings**—A very fair business is being done, considering the general quiet feeling on the market. Prices remain as quoted last week. We quote nominally: Malleable fittings, 33 1/3 to 35 per cent.; cast iron (standard), 57 1/2 to 60 per cent.; headers, 52 1/2 to 55 per cent.; flanged unions, 60 per cent.; malleable bushings and plugs, 57 1/2 to 60 per cent.; nipples up to 6 inch inclusive, 67 1/2 to 70 per cent.

**Copper Range Boilers**—A fairly good trade is being done, affected to some extent by the general slackness prevailing. Discounts at 15 per cent. continue on the new prices issued some time ago.

**Iron Pipe**—Competition in this line



## A STUDY IN BLACK

RETURNED

SEP 15 1904

cut Book 23

Page 60  
Ans.



Did you ever try to interest your farmer customers or any other customers in black?

Do you know that black—the right black—makes the most serviceable paint and best preservative for a roof, whether metal or wood?

**RAMSAY'S RUBBER ROOFING** is the right black made for roofs, containing the elastic and wonderful preserving qualities of rubber.

Sell Ramsay's rubber roofing at \$1.00 per gallon, nicely put up in gallon cans, and see what a good profit it leaves you.

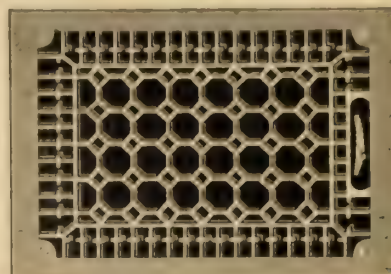
Suggest it to your customers for Autumn painting.

**A. RAMSAY & SON**  
MONTREAL

EST'D  
1842

PAINT  
MAKERS

## "REGISTERS OF QUALITY"



MOORISH FLOOR REGISTER.

**THE FERROSTEEL COMPANY,**  
BRIDGEBURG, ONT. and CLEVELAND, OHIO,

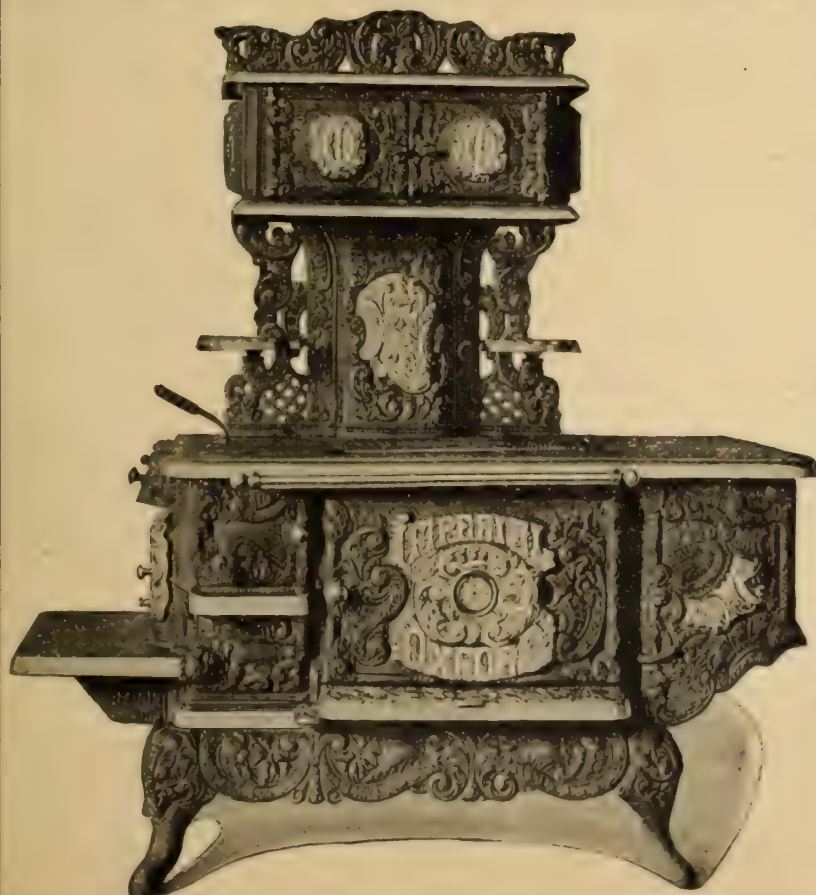
OFFER TWO LINES FOR 1904.

1. The time-tried and reliable line of Ferrosteel goods noted for accurate mechanism and perfect finish.
2. Our new Modified Steel Register, combining an absolutely rigid top with an invulnerable bottom.

PRICES LOWEST

TERMS LONGEST

Genuine Moorish or Plain Lattice Tops furnished with either line. All our goods are labeled. None others are genuine. Catalogues, prices and Special Circular illustrating our SIDE WALL REGISTERS on application.



## ESTABLISHED TRADE

You're not satisfied to sell a customer just once—you want him to buy from you whenever he wants anything in your line—you'd like as much of his trade as possible. If you were agent for the

## Imperial Oxford Range

you'd get the best trade of your district. All Oxford agents get the best of what is going. Their trade is thoroughly established on the reputation of the Imperial Oxford Range.

**The Gurney Foundry Co., Limited,**  
TORONTO WINNIPEG VANCOUVER

CORRESPONDENTS:  
**THE GURNEY-MASSEY CO., LIMITED,**  
MONTREAL, QUE.

**THE GURNEY STANDARD METAL CO., Limited**  
CALGARY, ALTA.



has not been quite so keen during the last three or four weeks. Business is somewhat quiet, but dealers look for it to pick up soon. Prices are quoted unchanged since last issue. We quote f. o. b. Toronto as follows: Black pipe, 1-8 in., \$1.85 to \$1.95; 1-4 in., \$1.90 to \$2.05; 3-8 in., \$2 to \$2.25; 1-2 in., \$2.25 to \$2.35; 3-4 in., \$2.85 to \$3; 1 in., \$4 to \$4.25; 1 1-4 in., \$5.75 to \$6; 1 1-2 in., \$7 to \$7.25; 2 in., \$10; 2 1-2 in., \$18; 3 in., \$21; 3 1-2 in., \$27; 4 in., \$32. Galvanized pipe, 1-4 in., \$2.05 to \$2.80; 3-8 in., \$2.80 to \$3; 1-2 in., \$3.15 to \$3.25; 3-4 in., \$4 to \$4.10; 1 in., \$5.90 to \$6; 1 1-4 in., \$8.25 to \$8.50; 1 1-2 in., \$10 to \$10.40; 2 in., \$13.95 to \$14.15.

**Enamelled Ware**—Prices are firm, and a fairly active trade is being done. We quote: "Standard," 5 1-2 feet, 21-2 in. rolled rim, first quality, at \$21.60; second quality \$16.35.

### Building in Montreal.

During the month of August building operations in Montreal showed an increase of \$119,610 over the corresponding month last year. New buildings to the number of 64 were commenced, and 55 buildings underwent alterations. The total value of building and alterations was \$312,700. The permits for new buildings issued included eighty dwellings, five stores, three warehouses, one factory, one school, three stables and ten sheds.

### Building Brisk.

During the month of August there were issued ninety permits for new buildings in Vancouver, B.C., from the office of the City Building Inspector, showing an increase of twenty over July, when seventy were issued. The aggregate value of the month's operations was \$159,800, as compared with \$114,720 for July.

One of the new buildings in prospect is the new Odd Fellows' Hall to be erected on Mount Pleasant, a commencement on which will be made at once. This will be situated on Westminster avenue, near Sixth avenue, and will be 90 by 44 feet, and will cost in the neighborhood of \$4,000.

The C.P.R. is putting in a splendid round house at North Bend, B.C. It is being built of granite and will have six stalls. An electric light generating plant is to be fitted up in the building. The company will adopt a new plan of heating, using hot air heating in the boiler room to a high temperature and

distributed by fans through the pipes. By this system arranged in the pits, it is stated an engine brought in frozen up can be thawed out in half an hour.

### Building Notes.

S. Maclure is building a frame residence on Esquimalt road, Victoria, B. C.

A new Presbyterian church is being built in Saltcoats, Man., and also a new postoffice.

### Building Permits.

#### TORONTO.

E. F. Ely, residence on Salem avenue, \$1,000.

C. E. Storey, dwelling on Albany avenue, \$3,500.

Herbert Johnston, dwelling on Smith street, \$3,600.

E. Purland, dwellings on Beverley street, \$5,000.

A. McDonald, dwelling on Rusholm Road, \$4,000.

John Duncan, dwelling on Sorauren avenue, \$1,300.

Bredin Bread Co., stable on Pears street, \$3,000.

J. W. Redfern, dwelling on Brunswick avenue, \$1,300.

Thos. Butler, dwelling on Manning avenue, \$4,000.

A. Sternmann, dwelling on Euclid avenue, \$6,000.

F. Tugram, dwellings on Lansdowne avenue, \$3,500.

C. J. Timson, dwelling on Beatrice street, \$2,000.

E. Taylor, dwellings on Delaware avenue, \$3,200.

F. W. Appleton, dwelling on Montrose avenue, \$4,000.

R. Saunders, dwellings on Delaware avenue, \$10,000.

C. R. S. Dinnick, dwellings on Bernard avenue, \$9,000.

May McWaters, dwelling on Lake View avenue, \$3,500.

W. H. Knox, alterations to residence, Walmer Road, \$1,800.

Clarkson Jones, storage building, Front street, \$15,000.

Vokes Hardware Co., warehouse on Esplanade street, \$1,500.

Eureka Refrigerator Co., addition to factory, Noble street, \$3,000.

G. T. Gorrie, dwellings on Markham and Herrick streets, \$1,000.

Royal Canadian Bicycle Co., club house, on Kintyre street, \$7,000.

G. W. Britnell, dwelling on Shaftsbury and Toronto avenues, \$2,750.

Keith & Fitzsimmons, addition to warehouse on King street west, \$3,000.

#### MONTREAL.

J. M. Jeol, house at 85 Drolet street, \$2,000.

Christian Bros., shed on Cote street, \$2,200.

Alf. Foisy, house on Huntley street, \$1,000.

S. Jasmin, two houses on Gauthier street, \$6,000.

Duclos & Roch, house on Cuvillier street, \$1,500.

V. Poissant, two houses on Delorimer avenue, \$6,000.

Mrs. Archambeault, house on St. Hubert street, \$1,800.

John Foster, house and store at La-val and Pine avenues, \$8,000.

#### BRANTFORD.

D. Spicer, brick house of Park avenue, \$1,300.

C. B. Wright, frame house, Marlboro street, \$700.

W. J. Adams, frame house, Wells avenue, \$950.

F. H. Gott, brick house, Nelson street, \$1,200.

Sherwood Lake, brick house, Murray street, \$1,400.

County of Brant, additions to jailor's residence, \$2,530.

Dr. Pearson, brick house on Brant avenue, \$3,000.

Joseph Cocker, brick house, Wellington street, \$1,000.

J. J. Fisher, two brick houses, Darling street, \$1,500 each.

James Lillis, two brick houses, Arthur street, \$1,100 each.

James McDougall, two brick houses on Wilkinson street, \$900 each.

### Activity in Mica.

There is a sign of renewed activity in the mica mining business in the vicinity of Ottawa. For the past two years the mica market has been overstocked, due to overproduction. On this account mines in the Ottawa Valley had to close down with thousands of dollars' worth of stock on hand. The first sign of buoyancy in this line is the purchase of a large mine near Cantley by the Westinghouse company, of Pittsburgh, Penn., from J. D. King, of Toronto. This company will begin work at once. The mine in question has been the subject of litigation between the present vendor and The Wakefield Mica Company of Ottawa, and has been closed nearly a year.



Have you  
tried it?  
Tried what?  
**SELLING  
MANTELS.**

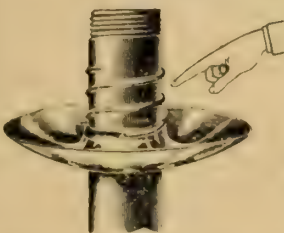


This is in your line of business, and it will  
pay you.

**The Batty Stove & Hardware Co**  
76 YORK ST., TORONTO.

**THE HOLDFAST  
CEILING and FLOOR PLATE**  
(Patent Pending.)

Easily Adjusted  
No Set Screw



Not affected by  
Expansion or Contraction

Manufactured only by Write for Samples and Discounts.  
**THE FAIRGRIEVE MFG. CO., Toronto, Can.**  
Phone Main 2993.

**A PERMANENT  
and Handsome Roof.**



**Arrow Brand Asphalt Ready Roofing.**

Will bring you profitable trade and satisfied customers. Comes in rolls ready to  
lay, all ready covered with gravel. Requires no experience to lay, and lasts  
for years without further attention.

**A. C. JENKING, Sole Agent,**  
Room 215 Coristine Building, - **MONTREAL**  
Sole agents being appointed in each district. Write to-day.

When in want of

**Hayfork Pulleys,  
Barn Door Hangers,  
Jack Screws,**

**Mrs. Potts Irons,  
Diamond Dampers,  
Etc.**

Order from

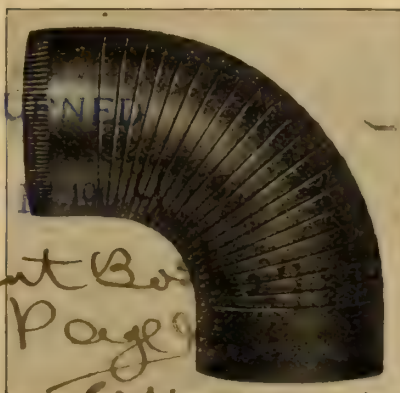
**The H. R. Ives Co., Ltd., - Montreal**



# Davidson's Stove Pipe Elbows

**"HERCULES" and "STANDARD"**

Made of best polished Blue Steel Neatly crated in  
Bundles of 1 doz.



**"HERCULES"**

Made in 2 sizes only, 6 and 7 inch.

**"STANDARD"**

Made in 5, 6, 7 and 8 inch.

**"EMPIRE" STOVE PIPE**

**IMPROVED  
1904 STYLE**

Made in 5, 6 and 7 inches.  
Nested in Crates of 25 each.

Simplest stove pipe to put together yet  
made. Only tools required are a pair  
of hands.

**Improved "Empire" Stove Pipes**  
are uniform in size, securing a perfect  
fit, and when put together will stay  
put together.



Patent applied for.

**The THOS. DAVIDSON MFG. CO. Limited. MONTREAL.**



# INDUSTRIAL GOSSIP

HARDWARE AND METAL would be pleased to receive from any authoritative source industrial news of any sort, the formation, or incorporation of companies, establishment or enlargement of mills, factories, foundries or other works, railway or mining news, etc. All such correspondence will be treated as confidential when desired.

**T.** W. GIBSON, Provincial Bureau of Mines, says that silver ore deposits of extraordinary richness have been found in the Temiskaming District. He says that there probably is no other place in the world where ores of such richness and such availability could be found. Tons of silver was now being taken out, and one man made the claim that in three months he had mined \$70,000 worth of ore. The ores also contained cobalt, nickel and arsenic, mispikle and iron pyrites.

• • •

Couture Bros., who have been manufacturing brick on the bank of the Seine River in St. Boniface, Man., for the past ten years, have about exhausted their clay beds in that locality and have secured a new site nearby, and have installed a new and modern plant, which will not only enable them to increase their output, but also make it possible for them to keep the plant in operation until midwinter.

• • •

The Department of Trade and Commerce has been requested to send an inspector to Bannockburn, Ont. It seems that a company at that point proposes to take advantage of the lead bounty act passed at the last session. A smelter has been erected at Bannockburn and a considerable quantity of lead is at the station awaiting the report of a Government inspector so the company may claim the Government bounty upon it.

• • •

At the annual meeting of the Associated Silver-Lead Mines of B. C., held in Sandon recently, the following officers were elected: President, A. C. Garde; vice-presidents, James Cronin, W. S. Drewey, W. S. Jenkins, Wm. Hunter and Geo. Alexander; executive committee, John L. Retallack, Geo. D. Potter, Norman Carmichael, Louis Pratt, W. E. Zwicky, H. Giegerich, N. J. Cavanaugh; treasurer, O. V. White; secretary, N. J. Cavanaugh.—Lardeau Eagle.

## NOTES.

The official opening of the branch line of railway from Winnipeg to Selkirk has taken place.

The Economical Gas Co., Toronto, are installing a new coal gas plant in Owen Sound.

The J. I. Case Threshing Machine Co., Racine, Wis., manufacturers of threshing and harvesting machinery, are trying to secure a site for a Canadian factory in Fort William, Ont.

The sash and door factory of Fraser & Hamilton, Ottawa, has been gutted by fire, causing damage of about \$2,000. The fire evidently originated in the boiler room or in the heating apparatus in connection with the dry kiln.

—

## COMPANIES INCORPORATED.

John C. Green & Co., Limited, Toronto; capital, \$125,000; purpose, to carry on a wholesale millinery and fancy goods business. The directors are: J. C. Green, H. E. W. Green, and R. W. Green, all of London.

The Ferroleum Co., Limited, Toronto; capital, \$30,000; purpose, to manufacture and sell medicine. The directors are: G. Gibson, E. C. Mackenzie, F. H. Honeywell, C. S. Robertson, and C. Heath, all of Toronto.

Peterboro Rubber Co., Limited, Peterboro; capital, \$500,000; purpose, to manufacture and deal in all kinds of rubber goods. The directors are: L. T. Vance, Marion, Ind.; H. E. Address, Akron, Ohio, and R. Bayley, Bowmanville, Ont.

Drug Trading Co., Limited, Toronto; capital, \$80,000; purpose, to manufacture and deal in drugs of all kinds. The directors are: W. A. Hargreaves, I. Curry, Geo. Marshall, A. E. Walton, A. M. Dog, W. H. Worden, and D. E. Munro, all of Toronto.

Meyers Milling & Elevators, Limited, Listowel, Ont.; capital, \$100,000; purpose, to deal in grain and cereals of all kinds. The directors are: B. H. Meyers and J. S. Meyers, both of Listowel; H. S. Osler, J. M. Ewing and A. G. Ross, all of Toronto.

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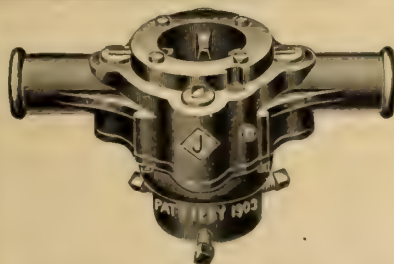
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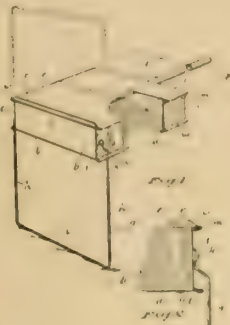
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## MODERN FOUNDRIES.

AT the recent convention of the  
American ear Foundrymen's As-  
sociation at Indianapolis, David  
Spence, Chicago, discussed the need of  
up-to-dateness in foundries in the fol-  
lowing way:

One of the crying needs of the foundry industry to-day is up-to-date shops. Only with these can first class work be turned out most cheaply. In building a modern foundry, the wisest thing the owners can do is to get a first-class foundry superintendent and have him assist in the drawing up of the plans. The buildings should be high enough to insure good ventilation, and give plenty of light. Good cranes should be provided, as well as core ovens, and a track running through the foundry, properly provided with turn-tables at each end and in front of the cupola. This track should extend out to the yard, so that large flasks can be loaded and run to their place with little help, instead of calling off all hands for the purpose, which may be seen in many places.

The shop should have a good cupola stage. I have seen otherwise well designed and built foundries spoiled in their cupola arrangement. A stage for the cupola should be large enough to hold three heats of fuel and iron. When I erected the stage for the first foundry of the B. F. Sturtevant Co., we could put a car of iron and a car of hard coal on it, and then have room for our scale and to work.

Another important point for the foundry is a good core-room, with plenty of space for the men, and shelf room for the stock cores. This room should be made as pleasant as possible. Here, as well as in the rest of the foundry modern conveniences will add much to the comfort of the men, keep them contented, and enable them to produce more and better castings than are made in many of the makeshift shops in which it is hard to tell where a man can work.

We need up-to-date foundries as much as we need the best of sand, facings and iron to produce the best results. The men, moreover, take more interest in their work. There has been a marked advance in the foundry industry within the last twenty years, and much of this may be traced to modernizing the shops.

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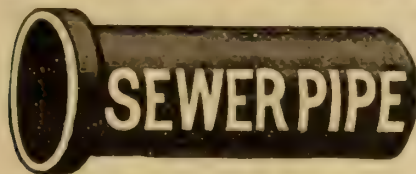
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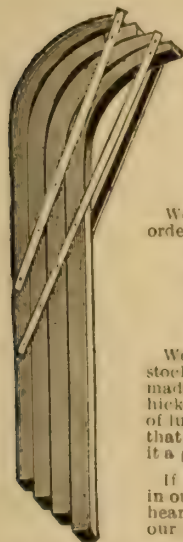
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| Drill steel, per lb ..... | 0 08 | 0 10 |
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| Yellow ochre                                              | 1 12 1/2   |
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| English oxides                                            | 3 00 3 25  |
| American oxides                                           | 1 25 2 75  |
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| Super magnetic oxides, 93 p.c.                            | 2 00       |
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| umber                                                     | 6 00 7 00  |
| Raw umber                                                 | 6 00 7 00  |
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| Chrome greens                                             | 5 50       |
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Per 100 lb.

|                               |           |
|-------------------------------|-----------|
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| Monarch                       | 5 00      |
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|              |      |
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| No. 1, casks | 4 00 |
| No. 1, kegs  | 4 25 |

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|                                 |      |
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| "Floor                          | 1 25 |
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| "Floor                          | 1 10 |
| National                        | 1 05 |

### PUTTY.

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| Bulk in bbls.                              | 1 45 |
| Bulk in less quantity                      | 1 70 |
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| Bladders in kegs, boxes or loose           | 1 85 |
| 25-lb. tins                                | 1 80 |
| 10-lb. tins                                | 2 05 |
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### VARNISHES.

In 5-gal. lots. Per gal. Net.

|                                           |         |      |
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| Pale durable body                         | 4 10    | 4 25 |
| rubbing                                   | 2 85    | 3 20 |
| No. 1 brown japan                         | 1 50    | 1 60 |
| Gold size, japan                          | 0 85    | 0 90 |
| Elastic oak                               | 1 50    | 1 50 |
| Furniture, extra                          | 1 10    | 1 25 |
| No. 1                                     | 0 90    | 1 00 |
| Hard oil finish                           | 1 35    | 1 50 |
| Light oil finish                          | 1 60    | 1 70 |
| Damar                                     | 1 75    | 2 00 |
| Shellac, white                            | 2 40    | 2 50 |
| orange                                    | 2 30    | 2 40 |
| Turpentine, brown japan                   | 1 10    | 1 20 |
| black japan                               | 1 10    | 1 20 |
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| Granite floor finish, per gal.            | 2 75    |      |
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| case, from 1 gal., \$2.50.                |         |      |

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|------------------|------|----------|
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| French medal     | 0 10 | 0 14     |
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| Gelatin          | 0 18 | 0 20     |
| Strip            | 0 18 | 0 20     |
| Coopers          | 0 19 | 0 20     |
| Huttner          |      |          |
| Ground           | 0 12 | 0 16     |
| Cologne, genuine |      |          |

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| Chemically prepared black edge grey cloth wads, in boxes of 250 each                | Per M. |
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| 9 and 10 gauges                                                                     | 0 70   |
| 7 and 8                                                                             | 0 90   |
| 5 and 6                                                                             | 1 10   |
| Superior chemically prepared pink edge, best white cloth wads, in boxes of 250 each |        |
| 11 and smaller gauge                                                                | 1 15   |
| 9 and 10 gauges                                                                     | 1 40   |
| 7 and 8                                                                             | 1 65   |
| 5 and 6                                                                             | 1 90   |

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Discount 20 per cent.

|                             |          |
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### APPLE PARERS.

Woodyatt Hudson, per doz., net

Gilmour's, discount 65 and 5 per cent. off list.

### AXES.

|                          |       |       |
|--------------------------|-------|-------|
| Chopping Axes            |       |       |
| Single bit, per doz.     | 7 00  | 10 00 |
| Double bit, " "          | 10 00 | 18 00 |
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| Hunters' Axes            | 5 50  | 6 00  |
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Red Ridge, boys', handled

Underhill American Bench Axes, 40 p.c.

### AXLE GREASE.

Ordinary, per gross

Best quality

### BELLS.

Brass, 60 per cent.

Nickel, 55 per cent.

American make, discount 63 1/2 per cent.

Canadian, discount 45 and 50 per cent.

### DOOR.

Gongs; Sargent's

Peterboro', discount 50 and 10

per cent. off new list.

### FARM.

American, each

American, per lb.

### HOUSE.

Hand, per doz.

Moulders, per doz.

Blacksmiths', discount 40 per cent.

### BELTING.

Extra, 60 per cent.

Standard, 60 and 10 per cent.

No. 1, not wider than 6 in., 60, 10 and 10 per cent.

Agricultural, not wider than 4 in., 75 per cent.

### RITS.

Gilmour's, discount 60 per cent.

Rockford, discount 50 and 10 per cent.

Jennings' Gen., net list.

### CAR.

Gilmour's, 47 1/2 per cent.

### EXPANSIVE.

Clark's, 40 per cent.

Clark's, per doz.

Diamond, Shell, per doz.

Nail and Spike, per gross.

### BLIND AND RED STAPLES.

All sizes, per lb.

### ROTS AND NUTS.

Carriage Bolts, common (\$1 list)

" " 3-16 and 1/2

" " 5-16 and 1/2

" " 7-16 and 1/2

" " full sq. (\$2 40 list)

" " Norway Iron (\$3 list)

Machine Bolts, all sizes, 1 and 1/2

Machine Bolts, 7-16 and up

Plough Bolts

Blank Bolts

Roll Ends

Sleigh Shoe Bolts

Coach Screws, cone point

Nuts, square, all sizes, 4c. per lb. off.

Nuts, hexagon, all sizes, 4c. per lb. off.

Stove Rods per lb. 1/4 to 6c.

### ROOT CALKS.

Small and medium, ball

Small heel

### BRIGHT WIRE GOODS.

Discount 62 1/2 per cent.

### BUTCHERS' CLEAVERS.

German

American

### BUTCHER KNIVES.

Bailey's

### BUILDING PAPER, ETC.

Tarred Felt, per 100 lb.

Ready roofing, 2-ply, not under 45 lb.

per roll

Ready roofing, 3-ply, not under 65 lb.

per roll

Carpet Felt

Heavy Straw Sheathing

Dry Sheathing

Tar

Dry Fibre

Tarred Fibre

O. K. & I. X. L.

Roam sized

Oiled Sheathing

Oiled

Roof Coating, in barrels

Refined Tar

Coal Tar

Roofing Pitch

### BULL RINGS.

Copper, \$2.00 for 2 1/2-inch, and \$1.90 for 2-inch

### BUTTS.

Wrought Brass, net revised list.

### CAST IRON.

Loose Pin, discount 60 per cent.

### WROUGHT STEEL.

Fast Joint, discount 65, 10 and 2 1/2 per cent.

Loose Pin, discount 65, 10 and 2 1/2 per cent.

Berlin Bronzed, discount 70, 70 and 5 per cent.

Gen. B. bronzed

### CARPET STRETCHERS.

American

Bullard's

### CASTORS.

Red, new list, discount 55 to 57 1/2 per cent.

Plate, discount 52 1/2 to 57 1/2 per cent.

### CATTLE LEADERS.

Nos. 32 and 33

### CHALK.

Carpenters' Colored, per gross

White lump

Red

Crayon

### CHISELS.

Socket, Framing and Firmer.

Broad s, discount 60 and 10 per cent.

Worms, discount 50 and 10 per cent.

P. S. & W. Extra, discount 60 and 10 per cent.

### FOODS-STOCK.

Colonial Stock Foods, 50c. packages,

" " " 25c. pkgs.

" " " 10c.

" " " 25-lb. pall, each

Poultry Foods, 25c. packages

Cough Powders, per doz.

Worm

International Stock Foods, \$1 packages,

per doz.

International Stock Foods, per doz.

" " " Poultry

" " " Worm Powders

" " " Pine Healing Oil

" " " Plaster Casts

" " " Hoof Ointment

Also 25c. pkgs. at \$2 per doz. 50c. pkgs. at 4 per doz.



# An Every Day Occurrence With Us

is the receipt of letters from customers who have used our Wire Edged Ready Roofing and who are so well pleased with the material that they want more.

## The Paterson Mfg. Co., Limited

Toronto and Montreal.

### COMPASSES, DIVIDERS, ETC.

American, discount 62½ to 65 per cent.

#### CONDUCTOR PIPE.

| Plain or Corrugated.    |      |
|-------------------------|------|
| 2 inch.....per 100 feet | 3 00 |
| 3 "....."....."         | 4 00 |
| 4 "....."....."         | 5 25 |
| 5 "....."....."         | 6 75 |
| 6 "....."....."         | 9 00 |

#### CRADLES, ORAIN.

Canadian, discount 20 to 25 per cent.

#### CROSSCUT SAW HANDLES.

|                            |       |
|----------------------------|-------|
| S. & D. No. 3.....per pair | 0 17½ |
| S. & D. " 5....."          | 0 22½ |
| S. & D. " 6....."          | 0 15  |
| Boynton pattern....."      | 0 20  |

#### DOOR SPRINGS.

|                           |           |
|---------------------------|-----------|
| Torrey & Rod.....per doz. | 1 75      |
| Coil, 9 to 11 in....."    | 0 85 1 65 |
| English....."             | 2 00 4 00 |

#### DRAW KNIVES.

Coach and Wagon, discount 50 per cent.

Carpenters' discount 60 and 10 per cent.

#### DRILLS.

Hand and Breast.  
Miller's Falls, per doz., net list.

#### DRILL BITS.

Morse, discount 37½ to 40 per cent.  
Standard, discount 50 and 5 to 55 per cent.

#### FAUCETS.

Common, cork-lined, discount 35 per cent.

#### EAVETROUGHS.

10-inch.....per 100 ft. 10 00

#### ELBOWS (stovepipe.)

|                                   |      |
|-----------------------------------|------|
| 5 and 6-inch, common.....per doz. | 1 20 |
| 7-inch....."                      | 1 35 |
| Polished, 15c per dozen extra.    |      |

#### ESCUTCHEONS.

Discount 50 and 10 per cent., new list

#### ESCUTCHEON PINS.

Iron, discount 40 per cent.

#### FACTORY MILK CANS.

Discount off revised list, 40 per cent.

#### FILES AND RASPS.

| Great Western.....                                                      | 70 and 10 per cent. |
|-------------------------------------------------------------------------|---------------------|
| Arade.....                                                              | 70 " 10 "           |
| Keeney & Foot.....                                                      | 70 " 10 "           |
| Disston.....                                                            | 70 " 10 "           |
| American.....                                                           | 70 " 10 "           |
| J. Barton Smith.....                                                    | 70 " 10 "           |
| McClellan.....                                                          | 70 " 10 "           |
| Eagle.....                                                              | 70 " 10 "           |
| Nicholson, 60 and 10 to 60 10 and 5 "                                   |                     |
| Royal.....                                                              | 80 " 10 "           |
| Clayton.....                                                            | 70 to 75 "          |
| Black Diamond, 60 and 10 to 60, 10 and 5 per cent.                      |                     |
| Jowitt's, English list, 25 to 27½ per cent.                             |                     |
| Nicholson File Co.'s "Simplicity" file handle, per gross 85c. to \$1.50 |                     |

#### GLASS.

#### Window. Box Price.

| Size United          | Per   | Per    | D Diamond    |
|----------------------|-------|--------|--------------|
| Inches.              | 50 ft | 100 ft | 50 ft 100 ft |
| Under 26.....        | 3 80  | 5 06   |              |
| 26 to 40.....        | 4 00  | 5 44   |              |
| 41 to 50.....        | 4 50  | 5 55   |              |
| 51 to 60.....        | 4 75  | 7 50   |              |
| 61 to 70.....        | 5 00  | 8 62   |              |
| 71 to 80.....        | 5 30  | 9 35   |              |
| 81 to 90.....        | 5 50  | 10 75  |              |
| 91 to 100.....       | 5 75  | 12 30  |              |
| 101 to 110.....      | 6 00  | 15 00  |              |
| 111 to 120.....      | 6 25  | 18 00  |              |
| Discount 15 per cent |       |        |              |

### GAUGES.

#### Marking, Mortise, Etc.

Stanley's discount 50 to 55 per cent.

#### Wire Gauges.

Winn's, Nos. 26 to 33.....each 1 65 2 40  
GILLET'S POWDERED LYE.  
1-case, \$3.70; 3-case, \$3.60; 5-case and over, \$3.50.

#### HALTERS.

|                              |       |
|------------------------------|-------|
| Rope, ¾-inch.....per gross   | 12 00 |
| Rope, 1-inch....."           | 9 00  |
| Rope, 1 to 1½-inch....."     | 14 00 |
| Leather, 1-inch.....per doz. | 4 00  |
| Leather, 1½-inch....."       | 5 20  |
| Web....."                    | 2 45  |

#### HAMMERS.

##### Nail.

Maydole's, discount 5 to 10 per cent. Canadian discount 25 to 27½ per cent.

##### Tack.

Magnetic.....per doz. 1 10 1 20

##### Sledge.

Canadian.....per lb. 0 07½ 0 08½

##### Ball Peen.

English and Canadian per lb. 0 22 0 25

#### HANDLES.

Axe, 2nd growth, per doz. net 3 00 4 00  
Store door.....per doz. 1 00 1 50

#### Fork.

C. & B., discount 40 per cent., revised list.

#### Hoe.

C. & B., discount 40 per cent., revised list.

#### Saw.

American.....per doz. 1 00 1 25

#### Plane.

American.....per gross 3 15 3 75

#### Hammer and Hatchet.

Canadian, discount 40 per cent.

#### HANGERS.

|                                   | doz.  | pairs. |
|-----------------------------------|-------|--------|
| Steel barn door.....              | 8 00  | 10 00  |
| Stearns, 4-inch.....              | 4 50  |        |
| " 5-inch.....                     | 6 00  |        |
| Zenith.....                       | 9 00  |        |
| Lane's covered—                   |       |        |
| No. 11, 5-foot run.....           | 8 40  |        |
| No. 11½, 10-foot run.....         | 10 80 |        |
| No. 12, 10-foot run.....          | 12 60 |        |
| No. 14, 15-foot run.....          | 21 00 |        |
| Steel, covered.....               | 4 00  | 11 00  |
| " track, 1 x 3-16 in(100 ft)..... | 3 75  |        |
| " 1½ x 3-16 in(100 ft).....       | 4 75  |        |

#### HARVEST TOOLS.

Discount 60 per cent.

#### HATCHETS.

Canadian, discount 40 to 42½ per cent.  
Shingle, Rad Ridge 1, per doz..... 4 40  
" 2..... 4 85  
Barrel, Underhill..... 5 00

#### HAT ENAMEL.

Henderson & Potts "Anchor Brand"

#### HINGES.

Blind, Parker's, discount 60 per cent.  
Heavy T and strap, 4-in., per lb..... 0 06½  
" 5-in., "..... 0 06½  
" 6-in., "..... 0 06  
" 8-in., "..... 0 05½  
" 10-in., "..... 0 05½

Light T and strap, discount 65 and 5 per cent.

Screw hook and hinge—

6 to 10 in.....per 100 lb. 4 50

12 in up..... 3 25

Spring, No. 20, per gro. pairs 10 50

#### HORS.

Garden, Mortar, etc., discount 60 per cent.  
Planter.....per doz. 4 00 4 50

#### HOLLOW WARE.

Timed cast, 35 per cent.

#### HOOKE.

Cast Iron.

Bird cage.....per doz. 0 50 1 10

Clothes line, No. 61..... 0 00 0 70  
Harness..... 0 60 12 00  
Hat and coat.....per gro. 1 10 10 00  
Chandelier.....per doz. 0 50 1 00

Wrought Iron.  
Wrought hooks and staples Canadian discount 60 per cent.

Wire.  
Hat and coat, discount 60 per cent.  
Belt.....per 1,000 0 60  
Screw, bright, discount 60 per cent.

HORSE NAILS.  
"C" brand, 40, 10 and 7½ per cent. off list { Oval { head  
"M" brand, 55, per cent. {  
Countersunk, 57½ per cent. {  
"Monarch," 50 and 7½ per cent. {  
"Peerless" 50 per cent. dis.

HORN SHOES.  
F.O.B. Montreal  
No. 2 No. 1  
and  
larger, smaller.

Iron Shoes.  
Light, medium and heavy..... 3 65 3 90  
Snow shoes..... 3 90 4 15

Steel Shoes.  
XL, sizes 1 to 5..... 5 35  
Light, No. 2 and larger..... 3 80  
No. 1 and smaller..... 4 05  
Featherweight, all sizes 0 to 4..... 5 35  
Toeweight, all sizes 1 to 4..... 6 60

JAPANNED WARE.  
Discount 50 per cent.

ICE PICKS.  
Star.....per doz. 3 00 3 25

KETTLES.  
Brass spun 7½ per cent. discount off new list.  
Copper.....per lb. 0 30 0 50  
American, 60 and 10 to 65 and 5 per cent.

KEYS.  
Lock, Canadian dis. 40 to 40 and 10 per cent.

Cabinet, trunk and padlock,  
American.....per gross 0 60

KNOBS.  
Door, japanned and N.P., per doz..... 1 50 2 50  
Bronze, Berlin.....per doz. 2 75 3 25  
Bronze, Genuine..... 6 00 9 00

Shutter, porcelain, F. & L.  
screw.....per gross 1 30 2 00  
White door knobs.....per doz. 2 00

Net prices.  
LAMP WICKS.  
Discount, 60 per cent.

LANTERNS.  
Cold Blast.....per doz. 7 00  
No. 3, "Wright's"..... 8 50  
Ordinary, with O burner..... 4 00  
Dashboard, cold blast..... 9 00  
No. 0..... 5 75

Japanning, 50c. per doz. extra.

LEMON SQUEEZERS.  
Porcelain lined.....per doz. 2 20 5 60  
Galvanized..... 1 87 3 85  
King, wood..... 2 75 2 90  
King, glass..... 4 00 4 50  
All glass..... 0 50 0 90

LINES.  
Fish.....per gross 1 05 2 50  
Chalk..... 1 90 7 40

LAWN MOWERS.  
Woodyatt, 10½-in. wheel, 14-in. cut .. 8 50  
Star, 9-in. "..... 7 00  
Daisy, 8-in. "..... (net) 2 87½  
Philadelphia, 7½ in. "..... 7 00  
Ontario, 7½ in. "..... 15 80  
King Edward, 12-in. "..... 9 50

Discount, 50 per cent., with freight concessions in quantity shipments.

Maxwell & Sons:  
10½-in. high wheel..... 7 50 10 00  
9-in. "..... 5 50 6 25  
8-in. "..... 4 90 5 50

Discount 50 per cent.

LOCKS.  
Canadian, 50 to 50 and 10 per cent.  
Russell & Erwin.....per doz.

Cabinet.  
Eagle, discount 30 per cent.

Padlocks.  
English and Am.....per doz. 0 50 6 00  
Eagle, discount 20 to 25 per cent.

MACHINE SCREWS.  
Iron and Brass.  
Flat head, discount 25 per cent.  
Round head, discount 20 per cent.

MALLETS.  
Tinmiths.....per doz. 1 25 1 50  
Carpenters', hickory, " 1 25 3 75  
Lignum Vitae..... 3 85 5 00  
Caulking, each..... 0 60 2 00

MATTOCKS.  
Canadian.....per doz. 5 50 6 00

MEAT CUTTERS.  
American, discount 3½ per cent.  
German, 15 per cent.

Gem.....each 1 15

MILK CAN TRIMMINGS.  
Discount 25 per cent.

NAILS. Cut. Wire.

2d and 3d..... 3 30 3 45  
3d..... 2 95 3 12  
4 and 5d..... 2 70 2 85  
6 and 7d..... 2 60 2 80  
8 and 9d..... 2 45 2 60  
10 and 12d..... 2 40 2 55  
16 and 20d..... 2 35 2 50  
30, 40, 50 and 60d (base)..... 2 30 2 45

Cut nails in carlots 5c. less.  
Wire nails in carlots are \$2.40.  
Steel cut nails 10c. extra.  
Miscellaneous wire nails, discount 75 per cent.  
Coopers' nails, discount 50 per cent.

NAIL PULLERS.  
German and American..... 1 75 2 50

NAIL SETS.  
Square, round and octagon,  
per gross..... 3 38  
Diamond..... 1 00

POULTRY NETTING.  
2-in. Mesh, 19 w.g., dis. 60 per cent.  
2-in. Mesh, 16 w.g. and heavier, 50 p.c.

OAKUM.  
U. S. Navy.....per 100 lb. 6 75  
Plumbers..... 3 00

OILERS.  
McClary's Model galvanized  
oil can, with pump, 5 gallon,  
per dozen..... 10 00  
Davidson oilers, discount 40 per cent.  
Zinc and tin, discount 50, 50 and 10 per cent.  
Copper.....per doz. 1 25 3 50  
Brass..... 1 50 3 50  
Malleable, discount 25 per cent.

GALVANIZED PAIS.  
Dufferin pattern pails, discount 45 per cent  
Flaring pattern, discount 45 per cent  
Galvanized washtubs, discount 45 per cent

PIECED WARE.  
Discount 40 per cent off list, June, 1899.  
10-qt. flaring sap buckets, discount 40 per cent  
6, 10 and 14-qt. flaring pails, dis. 40 per cent.  
Creamer cans, discount 40 per cent.

PICKS.  
Per dozen..... 6 00 9 00

PICTURE NAILS.  
Porcelain head.....per gross 1 35 1 50  
Brass head..... 0 40 1 00

PICTURE WIRE.  
Tin and gilt, discount 75 per cent.

PINE TAR.  
½ pint in tins.....per gross 7 80  
1 "..... 9 60

PLANES.  
Wood bench, Canadian discount 40 per cent.,  
American discount 50 per cent.  
Wood, fancy Canadian or America 37½ to 40 per cent



# Remington

NEW MODEL No. 9

## Single Barrel Shotgun

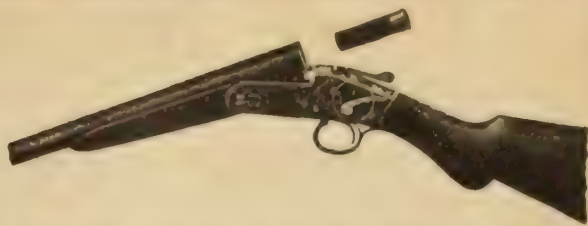
This Remington is distinctly a high grade product with special steel barrel, pistol grip, rebounding hammer, side locking lever, top snap action and has automatic ejector. Made in all popular gauges. An ideal boy's gun and good enough for any man. For sale by all dealers.

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|                                                 |                      |                                                   |            |                                               |                       |                                                     |          |
|-------------------------------------------------|----------------------|---------------------------------------------------|------------|-----------------------------------------------|-----------------------|-----------------------------------------------------|----------|
| <b>PLANE IRONS.</b>                             |                      | <b>SAP SPOUTS.</b>                                |            | <b>STAPLES</b>                                |                       | <b>ENAMELLED WARE</b>                               |          |
| English .....                                   | per doz. 2 00 5 00   | Bronzed iron with hooks ... per 1,000             | 7 50       | Galvanized .....                              | 3 00                  | White, Princess, Turquoise, Blue and White          |          |
| <b>PISTERS AND NIPPERS.</b>                     |                      | "Eureka" tinned steel, hooks "                    | 8 00       | Plain .....                                   | 2 80                  | discount 50 per cent.                               |          |
| Button's genuine, per doz. pairs, discount      |                      | <b>SAWS.</b>                                      |            | Coopers, discount 45 per cent.                |                       | Diamond, Famous, Premier, discount 50 and           |          |
| 37 1/2 to 40 per cent.                          |                      | Hand, Disston's, discount 12 1/2 per cent         |            | Poultry netting staples, discount 40 per cent |                       | Discout                                             |          |
| Button imitation, per doz.                      | 5 00 9 00            | S. & D., discount 40 per cent.                    | 0 35 0 55  | <b>STOCKS AND DIES</b>                        |                       | Grainger or Pearl, Imperial, Crescent, discount     |          |
| German .....                                    | 0 60 0 60            | Crosscut, Disston's ... per foot                  | 0 35 0 55  | American discount 25 per cent                 |                       | 50, 10 and 10 per cent                              |          |
| <b>PRESSED SPIKES.</b>                          |                      | S. & D., discount 35 per cent. on Nos. 2 and 3.   | 0 75 2 75  | <b>STONE</b>                                  |                       | Premier steel wire, 40 per cent                     |          |
| Discount 20 per cent.                           |                      | Hack, complete, ... each                          | 0 75 2 75  | Washita .....                                 | 0 28 0 50             | "Star" decorated steel and decorated white,         |          |
| <b>PULLEYS.</b>                                 |                      | " frame only, ... each                            | 0 50 1 25  | Hindostan .....                               | 0 06 0 07             | 25 per cent.                                        |          |
| Hothouse .....                                  | per doz. 0 55 1 00   | <b>HASH WEIGHTS.</b>                              |            | Labrador, slip .....                          | 0 09 0 13             | <b>WIRE.</b>                                        |          |
| Axle .....                                      | 0 22 0 33            | Sectional, ... per 100 lb.                        | 2 00 2 25  | " Axle .....                                  | 0 11 0 13             | <b>Smooth Steel Wire.</b>                           |          |
| Screw .....                                     | 0 27 1 00            | Solid .....                                       | 1 50 1 75  | Turkey .....                                  | 0 30 0 30             | No. 0.9 gauge .....                                 | \$2 60   |
| Awning .....                                    | 0 35 2 50            | Per lb. ....                                      | 0 28 0 30  | Arkansas .....                                | 1 50 1 50             | 10 " .....                                          | 60 extra |
| <b>PUMPS.</b>                                   |                      | <b>SAW SETS.</b>                                  |            | Water-of-Ayr .....                            | 0 10 0 10             | 12 " .....                                          | 12c "    |
| Canadian cistern .....                          | 1 80 3 60            | Lincoln and Whiting .....                         | 4 75       | Seythe .....                                  | 3 50 5 00             | 13 " .....                                          | 30c "    |
| Canadian pitcher spout .....                    | 1 40 2 10            | Hand Sets, Perfect .....                          | 4 00       | Grind, 2-in., 40 to 200 lb., per ton          | 25 00                 | 14 " .....                                          | 40c "    |
| <b>PUNCHES.</b>                                 |                      | X-Cut Sets, " .....                               | 7 50       | " under 2 in. thick, " .....                  | 29 00                 | 15 " .....                                          | 55c "    |
| Saddler's .....                                 | per doz. 1 00 1 85   | <b>SCALERS.</b>                                   |            | <b>STOVETOP</b>                               |                       | 16 " .....                                          | 70c "    |
| Conductor's .....                               | 3 00 15 00           | Gurney Standard, 40 per cent.                     |            | 5 and 6 inch, per 100 lengths                 | 7 00                  | Add 6c for coppering and 2 for tinning.             |          |
| Pinners, solid, ... per set                     | 0 72                 | Gurney Champion, 50 per cent.                     |            | 7 inch. ....                                  | 7 50                  | Extra net per 100 lb. Oiled wire 10c,               |          |
| " hollow, ... per inch                          | 1 00                 | Burrow, Stewart & Milne -                         |            | <b>ENAMELINE STOVE POLISH.</b>                |                       | spring wire \$1.25, special hay baling wire 30c,    |          |
| <b>RAZORS.</b>                                  |                      | Imperial Standard, discount 40 per cent.          |            | No. 4, 3 doz. in case, net cash               | 4 80                  | best steel wire 75c, bright soft drawn 13c,         |          |
| Wood .....                                      | per doz. net 1 20 up | Weight Beams, discount 35 per cent.               |            | No. 6, 3 doz. in case                         | 8 40                  | charcoal extra quality \$1.25, packed in casks      |          |
| <b>REGISTER.</b>                                |                      | Champion Scales, discount 50 per cent.            |            | <b>TACKS, BRADS, ETC.</b>                     |                       | or cases 15c, bagging and papering 10c, 50          |          |
| Discount 40 per cent.                           |                      | Fairbanks standard, discount 35 per cent.         |            | Carpet tacks, blued .....                     | 80 and 15             | and 100 lb. bundles 10c, in 25 lb. bundles          |          |
| <b>RIVETS AND BURG.</b>                         |                      | " Dominion, discount 55 per cent.                 |            | " " (in kegs) .....                           | 80 and 20             | 15c, in 5 and 10-lb. bundles 25c, in 1-lb.          |          |
| Iron Rivets, black and tinned, 60 and 10 p.c.   |                      | Richelieu, discount 55 per cent.                  |            | Cut tacks, blued, in dozens only              | 80                    | hanks, 50c, in 4-lb. hanks 75c, in 4-lb.            |          |
| Iron Burrs, discount 55 per cent.               |                      | Warren's new Standard, discount 40 per cent.      |            | " 1 weights .....                             | 60                    | banks \$1.                                          |          |
| Extras on Iron Rivets in 1-lb. cartons, 1c.     |                      | " Champion, discount 50 per cent.                 |            | Swedes cut tacks, blued and tinned            | 80 and 10             | Emp Steel Wire, discount 25 per cent.               |          |
| per lb.                                         |                      | " Weightbeams, discount 35 per cent.              |            | In bulk .....                                 | 75                    | List of extras: In 100-lb. lots No. 17,             |          |
| Extras on Iron Rivets in 4-lb. cartons, 1c.     |                      | <b>SCREW DRIVERS.</b>                             |            | In dozens .....                               | 75                    | 25 No. 18, \$3.30 No. 19, \$3.30 No. 20, \$3.65-    |          |
| per lb.                                         |                      | Sargent's .....                                   | 0 65 1 00  | Swedes, upholsterers', bulk .....             | 85, 12 1/2 and 12 1/2 | No. 21, \$7.30 No. 22, \$7.30 No. 23, \$7.65-No.    |          |
| Copper Rivets, with usual proportion burrs, 45  |                      | <b>SCREEN DOORS.</b>                              |            | " brush, blued and tinned                     | 70                    | 24, \$8 No. 25, \$9 No. 26, \$9.50 No. 27,          |          |
| per cent. Cartons, 1c. per lb. extra, net.      |                      | Common doors, 2 or 3 panel, walnut                |            | bulk .....                                    | 70                    | \$10 No. 28, \$11 No. 29, \$12 No. 30, \$13-        |          |
| Copper Burrs only, discount 30 and 10 per cent. |                      | stained, 4-in. style .....                        | 6 50       | Swedes, gimps, blued, tinned and              | 75 and 12 1/2         | \$14 No. 31, \$14 No. 32, \$15 No. 33, \$16-No. 34, |          |
| Extras on Tinned or Coppered Rivets, 4-lb.      |                      | Common doors, 2 or 3 panel, yellow and            |            | Japanned .....                                | 75 and 12 1/2         | \$17 Extra net tinned wire Nos. 17, 25,             |          |
| cartons, 1c. per lb.                            |                      | green stained, 4-in. style .....                  | 6 75       | Zinc tacks .....                              | 35                    | \$2 Nos. 26, 31, \$4 Nos. 32, 34, \$6 Coppered,     |          |
| <b>RIVET SETS.</b>                              |                      | Common doors, 2 or 3 panel, in natural            |            | Leather carpet tacks .....                    | 35                    | discounting 15c in 2-lb. bundles, 15c in 1-lb.      |          |
| Canadian, discount 35 to 37 1/2 per cent.       |                      | colors, oil finish .....                          | 8 75       | Copper tacks .....                            | 30                    | and 10-lb. bundles, 25c in 1-lb. hanks, 50c-        |          |
| <b>ROPE, ETC.</b>                               |                      | 3-in. style 20c. per dozen less.                  |            | Copper nails .....                            | 52 1/2                | in 4-lb. hanks, 50c in 1-lb. hanks, 50c-            |          |
| Sisal .....                                     | 0 11 1/2             | <b>SCREWS.</b>                                    |            | Trunk nails, black .....                      | 65 and 5              | packed in cases or cases, 15c - bagging or          |          |
| Pure Manila .....                               | 0 14 1/2             | Wood, F. H., bright and steel, discount 87 1/2    |            | Trunk nails, tinned .....                     | 65 and 5              | papering, 10c.                                      |          |
| "British" Manila .....                          | 0 12                 | Wood, R. H., bright, dis. 82 1/2 per cent.        |            | Clout nails, blued .....                      | 65 and 5              | Brass wire, discount 60 per cent. off the list.     |          |
| Cotton, 3-16 inch and larger .....              | 0 20 1/2             | " F. H., brass, dis. 80 per cent.                 |            | Chair nails .....                             | 35                    | Copper wire, discount 60 per cent. net cash         |          |
| " 5-32 inch .....                               | 0 25 1/2             | " R. H., dis. 75 per cent.                        |            | Patent brads .....                            | 40                    | 30 days, f.o.b. factory.                            |          |
| " 1 inch .....                                  | 0 25 1/2             | " R. H., bronze, dis. 75 per cent.                |            | Fine finishing .....                          | 40                    | Galvanized wire, per 100 lb. - Nos. 4 and 5,        |          |
| Russia Deep Sea .....                           | 0 16                 | " R. H., dis. 70 per cent.                        |            | Lining tacks, in papers .....                 | 10                    | \$3.70 to \$4.70 Nos. 6, 7, 8, \$3.15 to \$3.15     |          |
| Jute .....                                      | 0 09                 | Drive Screws, dis. 87 1/2 per cent.               |            | " " solid heads, in bulk .....                | 75                    | -No. 9, \$2.55 -No. 10, \$3.30 to \$3.30            |          |
| Lath Yarn, single .....                         | 0 10                 | Bench, wood .....                                 | 3 25 4 00  | Saddle nails, in papers .....                 | 10                    | -No. 11, \$3.25 -No. 12, \$2.65                     |          |
| " double .....                                  | 0 10 1/2             | " iron .....                                      | 4 25 5 00  | " in bulk .....                               | 15                    | No. 13, \$2.75 No. 14, \$3.75 to \$3.75             |          |
| Sisal bed cord, 48 feet .....                   | per doz. 0 85        | Set, case hardened, dis. 60 per cent.             |            | Tufting buttons, 22 line, in doz-             | 60                    | 15, \$4.30 -No. 16, \$4.30. Base sizes, No.         |          |
| " 60 feet .....                                 | 0 80                 | Square Cap, dis. 50 and 5 per cent.               |            | ings only .....                               | 60                    | 6 to 9, \$2.27 f.o.b. Cleveland. In Carlots         |          |
| " 72 feet .....                                 | 0 95                 | Hexagon Cap, dis. 45 and 5 per cent.              |            | Zinc glaziers points .....                    | 5                     | 12 1/2 less.                                        |          |
| <b>RULES.</b>                                   |                      | <b>SCYTHES.</b>                                   |            | Double pointed tacks, papers .....            | 90 and 10             | Clothes Line Wire, regular 7 strand, No. 17,        |          |
| Boxwood, discount 55 per cent.                  |                      | Per doz. net .....                                | 6 00 9 00  | bulk .....                                    | 40                    | \$4.65, No. 18 \$2.90, No. 19 \$2.90 Hollow         |          |
| Ivory, discount 37 1/2 to 40 per cent.          |                      | <b>SCYTHE SNATHS.</b>                             |            | Clinch and duck rivets .....                  | 45                    | 6 strand, No. 17, \$4.30, No. 18, \$2.70, No.       |          |
| <b>SAD IRONS.</b>                               |                      | Canadian, discount 40 per cent.                   |            | <b>TAPE LINES.</b>                            |                       | 19, \$2.35 No. 20, \$2.30, f.o.b. Hamilton,         |          |
| Mrs. Potts, No. 55, polished, ... per set       | 0 80                 | <b>SHEARS.</b>                                    |            | English, ass skin .....                       | 2 75 5 00             | Toronto, Montreal.                                  |          |
| Common, plain, ... per set                      | 4 50                 | Clauss, nickel, discount 80 per cent.             |            | English, Patent Leather .....                 | 5 50 9 75             | <b>WIRE FENCING</b>                                 |          |
| plated .....                                    | 5 50                 | Clauss, Japan, discount 67 1/2 per cent.          |            | Chesterman's .....                            | 0 90 2 85             | Galvanized barb .....                               | 3 75     |
| <b>SAND AND EMERY PAPER.</b>                    |                      | Seymour's, discount 50 and 10 per cent.           |            | " steel .....                                 | 0 80 8 00             | Galvanized, plain twist .....                       | 2 75     |
| S. & A. sand, discount, 40 and 5 per cent       |                      | <b>SHOVELS AND SPADES.</b>                        |            | <b>TINNERS' SNIPS</b>                         |                       | Galvanized barb, f.o.b. Cleveland, \$2.50 in        |          |
| Emery, discount 40 per cent.                    |                      | Cast iron, 16 x 24 .....                          | 0 85       | Per doz. ....                                 | 3 00 15 00            | less than carlots, and \$2.45 in carlots.           |          |
| Emery (Burton's) 5 to 10 per cent. advance      |                      | " 18 x 30 .....                                   | 1 00       | Clauss, discount 35 per cent.                 |                       | <b>COILED SPRING WIRE.</b>                          |          |
| on list                                         |                      | " 18 x 36 .....                                   | 1 40       | Tin case and dairy, 75 to 75 and 10 per cent. |                       | High Carbon, No. 9 .....                            | \$2 70   |
|                                                 |                      | <b>SNAPS.</b>                                     |            | Game, Newhouse, discount 25 per cent          |                       | " No. 11 .....                                      | 3 35     |
|                                                 |                      | Harness, German, discount 25 per cent.            |            | Game, H. & N. P. S. & W., 65 per cent.        |                       | " No. 12 .....                                      | 2 85     |
|                                                 |                      | Lock, Andrews' .....                              | 4 50 11 50 | Game, steel, 72 1/2, 75 per cent.             |                       | <b>WIRE CLOTH</b>                                   |          |
|                                                 |                      | <b>SOLDERING IRONS.</b>                           |            | <b>TROWELS.</b>                               |                       | Painted Screen, per 100 sq. ft. net .....           | 1 50     |
|                                                 |                      | 1 1/4-lb. ....                                    | 0 37       | Disston's, discount 10 per cent               |                       | Terms, 2 per cent. off 30 days                      |          |
|                                                 |                      | 2-lb. or over .....                               | 0 34       | Gerbiad .....                                 | 4 75 6 00             | <b>WASHING MACHINES</b>                             |          |
|                                                 |                      | <b>SQUARES.</b>                                   |            | S. & D., discount 35 per cent.                |                       | Round, re-acting per doz. ....                      | 36 30    |
|                                                 |                      | Iron, No. 493 .....                               | 2 40 2 55  | <b>TWINES.</b>                                |                       | Square .....                                        | 48 30    |
|                                                 |                      | " No. 494 .....                                   | 3 25 3 40  | Bag, Russian .....                            | 0 27                  | Elipse, per doz .....                               | 48 30    |
|                                                 |                      | Steel, discount 60 to 60 and 5 per cent.          |            | Wrapping, cotton, 3-ply .....                 | 0 24                  | Dressed " .....                                     | 48 30    |
|                                                 |                      | Try and Bevel, discount 50 to 52 1/2 per cent.    |            | " 4 ply .....                                 | 0 27                  | New Century, per doz .....                          | 48 30    |
|                                                 |                      | <b>STAMPED WARE.</b>                              |            | Mattress .....                                | 0 33 0 45             | Conitor Improved .....                              | 48 30    |
|                                                 |                      | Plain, discount 75 and 12 1/2 per cent. off re-   |            | Staging .....                                 | 0 27 0 35             | Daisy .....                                         | 48 30    |
|                                                 |                      | vised list.                                       |            | <b>VISES.</b>                                 |                       | <b>WRINGERS</b>                                     |          |
|                                                 |                      | Retinned, discount 75 per cent. off revised list. |            | Wright's .....                                | 0 13                  | Leader .....                                        | 33 00    |
|                                                 |                      |                                                   |            | Brook's .....                                 | 0 12 1/2              | Royal Canadian .....                                | 24 00    |
|                                                 |                      |                                                   |            | Pipe Vise, Hinge, No. 1 .....                 | 3 50                  | Royal American .....                                | 24 00    |
|                                                 |                      |                                                   |            | " No. 2 .....                                 | 5 50                  | Sampson .....                                       | 24 00    |
|                                                 |                      |                                                   |            | Saw Vise .....                                | 4 50 9 00             | Lightning .....                                     | 27 00    |
|                                                 |                      |                                                   |            | <b>Columbia Hardware Co.</b>                  |                       | Terms, 4 months, or 3 per cent. 30 days             |          |
|                                                 |                      |                                                   |            | Blacksmiths (discount) 60 per cent.           |                       | <b>WEIGHT IRON WASHERS.</b>                         |          |
|                                                 |                      |                                                   |            | parallel (discount) 45 per cent.              |                       | Canadian make, discount 40 per cent                 |          |



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 Jenkins & Hardy, Toronto.  
 Kidd, F. H., Toronto.  
 Merson, Geo. O., Toronto.  
 Williamson, T. G., Toronto.

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## Ash Sifter.

Cutts, C. M., & Co., Toronto Junction.

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 Dundas Axe Works, Dundas, Ont.  
 Warnock, James, & Co., Galt, Ont.

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 Syracuse Smelting Works, Montreal.

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 Taylor-Forbes Co., Guelph, Ont.

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